

**Clean Harbors Kansas, LLC  
RCRA Permit Application  
Section J-A  
Closure Plan  
Appendix J-B - Closure Cost Estimate**

**1.2 Inventory Management Assumptions**

Clean Harbors makes the following assumptions concerning the disposal of its hazardous waste inventory:

- (a). The amount of hazardous waste on-site at the time of closure will be equal to the maximum permitted capacity of each waste management unit.
- (b). Based on historical operating data, each tank can be clean of waste and residue without entering the tank.
- (c). A local third party contractor will operate the Clean Harbors facility in order to perform closure.
- (d). 1 yd<sup>3</sup> = 2000 lbs.
- (e). Liquid drums will be pumped and disposed offsite as bulk waste.
- (f). Empty drums will be sent offsite for recycling. No cost benefits are considered in this estimate.

**1.3 Decontamination Assumptions**

Clean Harbors makes the following assumptions concerning the decontamination of equipment:

- (a). The forklifts will be cleaned using detergents and/or solvents.
- (b). 500 gallons of contaminated rinseate will be generated during decontamination activities. This liquid will be bulked and sent off-site for disposal.
- (c). One (1) 55-gallon drums of contaminated debris (e.g., PPE, plastic sheeting, etc.) will be generated during equipment decontamination. Each drum will weigh 400 pounds.
- (d). The decontaminated equipment will be sold and/or sent to a scrap metal dealer. No cost benefits from this will be considered.

**Analytical costs**

| Analyte                    | Water Cost/Sample (\$) | Soil Cost/ Sample (\$) |
|----------------------------|------------------------|------------------------|
| 12 RCRA Metals             | 144                    | 144                    |
| Volatile Organic Compounds | 70                     | 75                     |
| Semivolatile               | 120                    | 150                    |
| Organochlorine Pesticides  | 75                     | 80                     |
| Herbicides                 | 95                     | 100                    |
| Total                      | 504                    | 549                    |

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**2.1 Container and Tank Waste Disposal**

| <b>TASK</b>  | <b>SOURCE FOR QUOTE</b>           | <b>QUOTE</b>  | <b>TOTAL COST</b> |
|--|-----------------------------------|---------------|-------------------|
| <b>Characterize, Load, Transport &amp; Dispose Drummed Waste</b> |                                   |               |                   |
| Liquid Fuel (52,360 G)   | Systech (as bulk liquid)          | \$.18/gal     | \$9,425           |
| Solid Fuel (635 DM)  | Systech (as drums)                | \$40.55/DM    | \$25,749          |
| Incineration (52,360 G)  | WTI (as bulk liquid)              | \$1.07/gal    | \$56,025          |
| Deepwell (34,925 G)  | Texas Molecular                   | \$.91/gal     | \$31,782          |
| Supervisor- 16 manhours  | Average contractor rates for area | \$62.50/hour  | \$1,000           |
| Pump drums/load drums (labor-32 manhours)                        | Average contractor rates for area | \$38.00/hour  | \$1,216           |
| Safety equipment- 6 man-days                                     |                                   | \$100/man/day | \$600             |
| Misc equipment - 2 day   |                                   | \$600/day     | \$1,200           |
| <b>SUBTOTAL</b>  |                                   |               | <b>\$126,997</b>  |
| <b>Characterize, Load, Transport &amp; Dispose Tank Waste</b>    |                                   |               |                   |
| Liquid Fuel (46,628 G)   | Systech (as bulk liquid)          | \$.18/gal     | \$8,393           |
| Incineration (16,955 G)  | WTI (as bulk liquid)              | \$1.07/gal    | \$18,142          |
| Deepwell (21,196 G)  | Texas Molecular                   | \$.91/gal     | \$19,288          |
| Supervisor- 8 manhours   | Average contractor rates for area | \$62.50/hour  | \$500             |
| Pump drums/load drums (labor-16 manhours)                        | Average contractor rates for area | \$38.00/hour  | \$608             |
| Safety equipment- 3 man-days                                     |                                   | \$100/man/day | \$300             |
| Misc equipment - 1 day   |                                   | \$600/day     | \$600             |
| <b>SUBTOTAL</b>  |                                   |               | <b>\$47,831</b>   |
| <b>TOTAL</b>   |                                   |               | <b>\$174,828</b>  |

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**2.2 Tank Decontamination**

| TASK                          | SOURCE FOR QUOTE                  | QUOTE         | TOTAL COST      |
|-------------------------------|-----------------------------------|---------------|-----------------|
| <b>Decontaminate 8 Tanks</b>  |                                   |               |                 |
| Supervisor- 32 manhours       | Average contractor rates for area | \$62.50/hour  | \$2,000         |
| labor-64 manhours             | Average contractor rates for area | \$38.00/hour  | \$2,432         |
| Safety equipment- 12 man-days |                                   | \$100/man/day | \$1,200         |
| Misc equipment - 4 days       |                                   | \$600/day     | \$2,400         |
| Cleaning supplies             |                                   |               | \$80            |
| Analysis - 8 samples          |                                   | \$504/sample  | \$4,032         |
| Deepwell (1,320 G)            | Texas Molecular                   | \$.91/gal     | \$1,201         |
| <b>TOTAL</b>                  |                                   |               | <b>\$10,945</b> |

Note: 185 gallons water generated per tank.

**2.3 Equipment Decontamination**

| TASK                           | SOURCE FOR QUOTE                  | QUOTE         | TOTAL COST |
|--------------------------------|-----------------------------------|---------------|------------|
| <b>Decontaminate Equipment</b> |                                   |               |            |
| Supervisor- 8 manhours         | Average contractor rates for area | \$62.50/hour  | \$500      |
| labor-16 manhours              | Average contractor rates for area | \$38.00/hour  | \$608      |
| Safety equipment- 3 man-days   |                                   | \$100/man/day | \$300      |
| Misc equipment - 1 days        |                                   | \$600/day     | \$600      |
| Cleaning supplies              |                                   |               | \$80       |
| Analysis - 2 samples           |                                   | \$504/sample  | \$1,008    |
| Deepwell (500 G)               | Texas Molecular                   | \$.91/gal     | \$455      |

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|                   |                    |            |                |
|-------------------|--------------------|------------|----------------|
| Solid Fuel (1 DM) | Systech (as drums) | \$40.55/DM | \$41           |
| <b>TOTAL</b>      |                    |            | <b>\$3,592</b> |

**2.4 Assessment of Soil**

| TASK                                 | SOURCE FOR QUOTE                  | QUOTE         | TOTAL COST      |
|--------------------------------------|-----------------------------------|---------------|-----------------|
| <b>Core concrete and sample soil</b> |                                   |               |                 |
| labor-80 manhours                    | Average contractor rates for area | \$38.00/hour  | \$3,040         |
| Safety equipment- 10 man-days        |                                   | \$100/man/day | \$1,000         |
| Misc equipment - 5 days              |                                   | \$600/day     | \$3,000         |
| Analysis (114 samples)               |                                   | \$549/sample  | \$62,586        |
| <b>TOTAL</b>                         |                                   |               | <b>\$69,626</b> |

**2.5 Decontaminate concrete**

| TASK                          | SOURCE FOR QUOTE                  | QUOTE         | TOTAL COST |
|-------------------------------|-----------------------------------|---------------|------------|
| <b>Decontaminate concrete</b> |                                   |               |            |
| Supervisor- 48 manhours       | Average contractor rates for area | \$62.50/hour  | \$3,000    |
| labor-96 manhours             | Average contractor rates for area | \$38.00/hour  | \$3,648    |
| Safety equipment- 18 man-days |                                   | \$100/man/day | \$1,800    |
| Misc equipment - 56 days      |                                   | \$600/day     | \$3,600    |

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|                        |                 |              |                 |
|------------------------|-----------------|--------------|-----------------|
| Analysis (11 samples)  |                 | \$504/sample | \$5,544         |
| Deepwell (4,600 G)     | Texas Molecular | \$.91/gal    | \$4,186         |
| Health Risk Assessment |                 | Lump sum     | \$25,000        |
|                        |                 |              |                 |
|                        |                 |              |                 |
| <b>TOTAL</b>           |                 |              | <b>\$46,778</b> |

Notes: Water generated assumed to be RCRA hazardous for disposal cost purposes

**2.6 Professional Engineer Certification**

| <b>TASK</b>                   | <b>SOURCE FOR QUOTE</b> | <b>QUOTE</b> | <b>TOTAL COST</b> |
|-------------------------------|-------------------------|--------------|-------------------|
| <b>PE Services</b>            |                         |              |                   |
| On site - 40 hours            |                         | \$150/hour   | \$6,000           |
| Report Preparation - 20 hours |                         | \$150/hour   | \$3,000           |
| <b>SUBTOTAL</b>               |                         |              | <b>\$9,000</b>    |
| <b>TOTAL</b>                  |                         |              | <b>\$9,000</b>    |

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## **APPENDIX J-C**

### **CLOSURE PLAN FOR BUILDINGS B, D, AND J**

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**Appendix J Closure Plan for Buildings B, D, and J**

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Table J.2, Removed

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#### **Acronym Table**

Clean Harbors Kansas, LLC (CHK)  
Treatment, Storage, or Disposal Facilities (TSDFs)  
Title 40 of the Code of Federal Regulations (40 CFR)  
Hazardous Waste Management Units (HWMUs)  
National Priorities List (NPL)  
Potentially Responsible Party (PRP)  
Kansas Department of Health and Environment (KDHE)  
Toxic Characteristic Leaching Procedure (TCLP)  
Container Management Unit (CMU)  
Toxic Characteristic Leaching Procedure (TCLP)

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### **Appendix J-C Closure Plan for Buildings B, D, and J**

#### **J-1 Introduction**

This plan describes the activities to be performed at Clean Harbors Kansas, LLC at the time of specific unit closure; it addresses closure of the following units:

Container Management Units – Buildings B, D, and J

Tanks – V9, V10, V11, V12, V13, V14, V15A, V15B, V15C, V15D, V16, V17<sup>1</sup>, V26<sup>2</sup>

Miscellaneous units – V26<sup>2</sup>, V34, V35

<sup>1</sup>V17 is a permitted hazardous tank that is and always has been used for storage of gasoline as a product.

<sup>2</sup>V26 is a dispersion tank and is permitted as both a tank and a miscellaneous unit. There is only one tank permitted as both.

Clean Harbors Kansas, LLC has determined that the units referenced above are to be “closed.” This closure term describes a container management unit, tank and/or miscellaneous unit closure with soil sampling under the concrete containment.

#### **J-2 Hazardous Waste Management Units to be Closed**

The Clean Harbors Kansas, LLC facility's hazardous waste management units to be closed are summarized in Table J.1, - Clean Harbors Kansas, LLC - Hazardous Waste Management Units, presented in Appendix JC-A, Tables. Specific descriptions of container management units and tank systems are located in Sections D (Container Management) and E (Tank Management) respectively. Miscellaneous units include all remaining units that have not been previously closed. V26 is the former dispersion tank, V34 is the drum washer and V35 is the drum scraper.

All container management units, tanks 9-14, 15a-15d and 16 and miscellaneous units to be closed have been emptied of all waste. Documentation of the cleaning tanks 9-14, 15a-15d and 16 is contained in Appendix C- Invoice for cleaning of tanks 9-14, 15a-15d, and 16

#### **J-3 Closure Performance Standard**

Clean Harbors Kansas, LLC will close each hazardous waste management unit and/or the entire facility in a manner that minimizes the need for further maintenance, and controls, minimizes, or eliminates (to the extent necessary to protect human health and the environment) post-closure escape of hazardous waste, hazardous constituents, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere. Closure activities will be performed in a manner that will comply with the closure performance standards as described in 40 CFR 264.111, 264.114 and 264.197.

Clean Harbors Kansas, LLC will meet these performance standards by removing all hazardous waste constituents to acceptable levels (see Section J-4a). All containers, tanks, miscellaneous units, piping, and other ancillary parts to the systems will be closed in one of the following ways:

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1. They will be dismantled and disposed as hazardous waste at a RCRA/HSWA permitted off-site disposal facility.
2. They will be decontaminated in accordance with the procedures discussed in Section J-4a and disposed at a solid waste landfill.
3. They will be decontaminated sufficiently to be salvaged for future use.
4. They will be transferred for use at another RCRA facility.

All permanent structures (e.g., concrete containment systems) will be decontaminated in accordance with the procedures discussed in Section J-4a and maintained in place.

Prior to use, a representative sample of the tap water utilized in the clean up, will be analyzed as a blank for the same parameters as the closure samples. If KDHE approves the use of this water, corresponding detectable chemicals of concern from compound table in Appendix J-A may be deducted from the analytical results from each final rinse sample as correction factors (e.g. if tap water sample has 0.1 ug/l 2,4,-D and the rinse water is 0.2 ug/l 2,4,-D, we would subtract 0.1ug/l from the rinse water and get a final value of 0.1ug/l 2,4-D) Use of tap water analytical results as correction factors is subject to prior KDHE approval

| Analyte                    | Analytical Method     |
|----------------------------|-----------------------|
| 27 metal compounds         | Various SW846 methods |
| Volatile organic compounds | EPA 8260              |
| Semivolatiles              | EPA 8270              |
| Organochlorine pesticides  | EPA 8081/8082         |
| Herbicides                 | EPA 8151              |

A detail analyte list is contained in Closure Plan for Buildings B, D, and J Appendix A  
Laboratory Analytical Method Detection Limits (MDL)

All analyses performed to verify that closure performance standards are met shall be performed at a laboratory certified by the state of Kansas for the specific analytical procedures used.

#### **J-3a Establishment of Cleanup Standards**

At closure, CHK will use Tier 2 risk based standards for residential soil to ground water pathway found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)", 2010 as the closure performance target level standards for rinse water at the site.

#### **J-4 Closure Activities**

Clean Harbors Kansas, LLC will close the units described in J-1 in accordance with the following procedures.

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1. Clean Harbors Kansas, LLC has notified the Kansas Department of Health and Environment (KDHE) or the United States Environmental Protection Agency (USEPA), Region 7, Administrator per this submittal.
2. If modifications to this closure plan are desired and have not been previously approved in accordance with 40 CFR 270.42 and 264.112, the modified portions of the plan will not be implemented until approval by KDHE or other authorized agencies has been received.
3. Clean Harbors Kansas, LLC will complete closure activities within 180 days after receiving closure plan approval from KDHE, unless an extension has been requested and approved in accordance with 40 CFR 264.113(b).
4. Clean Harbors Kansas, LLC will close the facility in accordance with the schedule discussed in Section J-7 and outlined in Table J.3, Closure Activity Schedule - Facility Closure, of this closure plan.
5. The container management units will be closed in accordance with Section J-9a of this closure plan. The tank and miscellaneous systems will be closed in accordance with Section J-9b of this plan.
6. All contaminated equipment and structures will be either properly disposed as hazardous waste or decontaminated in accordance with Section J-4a of this closure plan. After decontamination, equipment (such as conveyers) and structures may be salvaged for future use.
7. All wastes generated from closure activities will be handled in accordance with Section J-4b of this closure plan.
8. The Clean Harbors Kansas, LLC facility does not contain disposal units. All tank systems have secondary containment meeting the requirements of 40 CFR 264.193 (b) through (f). Also, all hazardous wastes and hazardous waste constituents will be removed from the facility during final closure and all structures will be decontaminated in accordance with this closure plan. If clean closure is not achieved, facility will submit a post-closure plan to the regulatory authority.
9. Clean Harbors will inform KDHE and EPA two weeks before closure activities are initiated. Confirmation samples (soil, final rinse water) must be collected in the presence of KDHE/EPA personnel and a Kansas Professional Engineer.
10. Within 60 days of closure completion, Clean Harbors Kansas, LLC will submit, either by hand delivery or by registered mail, a certification of closure and a closure report, to KDHE and the Regional Administrator of the USEPA, Region 7. The certification will be signed by CHK, as the owner/operator of the facility and by an independent Kansas registered professional engineer attesting that the units were closed in accordance with

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this closure plan.

11. Closure activities will be conducted in accordance with KDHE approved closure-specific work plans, sampling and analysis plans and quality assurance project plans.

#### **J-4a Disposal or Decontamination of Equipment and Structures**

During closure, all contaminated equipment and structures will be either properly disposed or decontaminated. Activities will be performed in a manner that will comply with the closure performance standards as described in 40 CFR 264.111, 264.114 and 264.197.

##### **J-4a(1) Soil**

During closure operations, the soil beneath containment systems of all hazardous waste management units will be investigated as follows.

1. Each management unit containment area will be mapped with a grid system. A 25' x 25' grid will be used in material storage areas and a 15' x 15' grid will be used in material processing areas. A soil sample will be taken in the center of each grid. If necessary, concrete borings will be done to sample each required location. Additionally, if a crack exists, a sample will be collected under the crack every 10'. (Note: This does not apply to surface cracks) A sample will also be collected under every sump.
2. Collect samples at soil interface beneath the concrete surface and below the underlying subgrade rock where rock exists, and analyze using SW-846 standard methods for the parameters identified in Appendix A. Borings for soil samples in non active containment areas will remain open until any additional sampling required by the EPA or KDHE for closure or corrective action purposes at that location has been completed.
3. Proper QA/QC procedures will be followed to control the potential loss of VOCs during sampling and transport.
4. For closure Soil will be considered clean for closure when results of sample analyses are at or below the Tier 2 risk based standards for non-residential soil pathway or the Residential Soil to Ground Water pathway, whichever is lower, found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)" 2010
5. If large areas of soil contamination, in excess of closure standards, are identified, a project specific assessment and cleanup plan will be prepared and submitted

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to the KDHE for approval and subsequent implementation. This will be done in accordance with the permit modification procedures of 40 CFR 270.42.

Alternatively, this may be addressed in the site's corrective action program if formally deferred to the corrective action process by the regulatory agencies.

6. KDHE can ask for additional soil samples at any location and depths within the regulatory unit, if staining of soil or other indications of contamination are present.

#### **J-4a(2) Hazardous Waste Management Units (HWMUs)**

Decontamination procedures for hazardous waste management units (i.e., tank systems, miscellaneous units and container storage units) are discussed in the following paragraphs. Specific procedures are outlined based on configuration of the equipment. "Exposed surfaces" are external surfaces and those internal surfaces that are readily scraped, sandblasted, brushed, or swept (i.e., accessible to standard techniques for removal of residual materials).

##### **J-4a(2)(a) HWMUs with no internal or complicated external parts**

All tank systems, miscellaneous units, container management units, and their associated secondary containment system components and ancillary equipment will be decontaminated as follows (unless the unit has internal and/or complicated external parts exposed to waste).

1. Surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be triple rinsed. The first wash/rinse will be performed with a high-pressure stream of steam or water with suitable detergents or other cleaning additives. The second wash/rinse will be performed using clean water with cleaning additives. Accumulated liquids from the two first washes will be collected and handled in accordance with Section J-4b of this closure plan. The third wash/rinse will be performed with clean (potable) water.
2. The equipment will be visually inspected after the triple wash/rinse to assess the presence of visible residue. If necessary, the facility will repeat all, or part, of the above procedures.
3. A representative sample will be taken of the rinse water from the final rinse of each hazardous waste management unit. These samples will be analyzed for total concentrations of all constituents identified in J-3. The constituents in J-3 are broken down further by compound in Appendix A – Laboratory Analytical Method Detection Limits (MDL)

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4. Prior to use, a representative sample of the tap water utilized in the clean up, will be analyzed as a blank for the same parameters as the closure samples. If KDHE approves the use of this water, corresponding detectable chemicals of concern from compound table in Appendix J-A may be deducted from the analytical results from each final rinse sample as correction factors (e.g. if tap water sample has 0.1 ug/l 2,4,-D and the rinse water is 0.2 ug/l 2,4,-D, we would subtract 0.1ug/l from the rinse water and get a final value of 0.1ug/l 2,4-D) Use of tap water analytical results as correction factors is subject to prior KDHE approval
5. A unit will be considered decontaminated when the rinsate sample analysis results are lower than the Tier 2 risk based standards for non- residential ground water found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)", 2010 or the analytical detection level if there is not a corresponding RSK standard.
6. If the unit is not decontaminated after performing Steps 1 through 5, the facility will either repeat the above procedures or dismantle the unit for further management and/or disposal at an off-site permitted TSDF as a hazardous waste. Equipment disposed in a landfill will meet the applicable Land Disposal Restriction (LDR) standards of 40 CFR 268.

#### **J-4a(2)(b) HWMUs with internal or complicated external parts**

Any miscellaneous unit or tank system with external or complicated internal parts exposed to wastes will be decontaminated as follows.

1. Exposed surfaces(i.e. building walls, floors) will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be triple rinsed. The first wash/rinse will be performed with a high-pressure stream of steam or water with suitable detergents or other cleaning additives. The second wash/rinse will be performed using clean water with cleaning additives. Accumulated solids and liquids from the two first washes will be handled in accordance with section J.4b of this closure plan. The third wash/rinse will be performed with clean water.
2. The equipment will be visually inspected after the triple wash/rinse to assess the presence of visual residue. If necessary the facility will repeat all, or part, of the above procedures.
3. If visible contamination remains, go to Step 6 below. If no visible contamination remains, a representative sample will be taken of the rinse water from the final rinse of each hazardous waste management unit. These samples will be analyzed for total concentrations of all constituents identified in J-3. The constituents in J-3 are broken down further by compound in Appendix J-A.

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4. Prior to use, a representative sample of the tap water utilized in the cleanup will be analyzed as a blank for the same parameters as the closure samples. If KDHE approves the use of this water, corresponding detectable chemicals of concern from the compound table in Appendix J-A may be deducted from the analytical results from each final rinse sample as correction factors (e.g. if tap water sample has 0.1 µg/l 2,4,-D and the rinse water is 0.2 µg/l 2,4,-D, we would subtract 0.1 µg/l from the rinse water and get a final value of 0.1 µg/l 2,4,-D). Use of tap water analytical results as correction factors is subject to prior KDHE approval.
5. A unit will be considered decontaminated when the rinsate sample analysis results are lower than the Tier 2 risk based standards for non-residential ground water found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)", 2010 or the analytical detection level if there is not a corresponding RSK standard.
6. If, after performing the above rinsing procedures, the equipment can not be decontaminated, the equipment will be transported by a licensed/permitted hauler to an off-site, permitted TSDF for further treatment or disposal. Equipment disposed in a landfill will meet the applicable Land Disposal Restriction (LDR) standards of 40 CFR 268.

#### **J-4a(3) Closure of Miscellaneous Handling Equipment**

A wide variety of equipment on site may be used for hazardous waste management. Equipment that has been in contact with hazardous waste will be decontaminated during closure activities. Equipment which may require decontamination during closure includes (but is not limited to) industrial trucks, drum dollies, handcarts, conveyers, augers, and other material transfer equipment, as well as hand tools such as shovels, brushes, scrapers, etc. During facility closure, this equipment may remain on-site in continued service or will be closed in one of the following ways:

- For closure of small equipment (such as hand tools), if visible contamination exists, the equipment will be disposed as hazardous waste at a RCRA/HSWA permitted off-site disposal facility,
- For closure of all equipment (including hand tools), if visible contamination exists, equipment will be decontaminated and disposed at a solid waste landfill. If evidence of contamination exists after decontamination, the equipment will be transported by a permitted/licensed hauler to a permitted RCRA/HSWA off-site TSDF for further treatment or disposal, or
- For closure of all equipment (including hand tools), if visible contamination exists, equipment will be decontaminated sufficiently to be salvaged for future use and potentially transferred for use at another RCRA facility. All decontamination activity will be performed over a portable, disposable decontamination pad (Example: kid swimming pool)

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**J-4a(3)(a) Decontamination of small miscellaneous handling equipment**

All hand tools and equipment without internal or complicated external parts will be decontaminated in accordance with the following procedures.

1. Surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be rinsed with a high-pressure stream of steam or water, possibly with suitable detergents or other cleaning additives, until either all visible contamination is removed, or until further removal is not feasible. All accumulated solids and liquids will be handled in accordance with section J-4b of this closure plan.
2. The equipment will be visually inspected for evidence of visible contamination.
3. The equipment will be considered decontaminated when no visible evidence of contamination exists.
4. If visible evidence of contamination remains and cannot be removed, the equipment will be disposed as a hazardous waste.

**J-4a(3)(b) Decontamination of large miscellaneous handling equipment with no internal or complicated external parts**

All large equipment with no internal or complicated external parts will be decontaminated as follows.

1. Surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be triple rinsed. The first wash/rinse will be performed with a high-pressure stream of steam or water with suitable detergents or other cleaning additives. The second wash/rinse will be performed using clean water with cleaning additives. Accumulated solids and liquids from the two first washes will be handled in accordance with section J.4b of this closure plan. The third wash/rinse will be performed with clean water.
2. The equipment will be visually inspected after the triple wash/rinse to assess the presence of visual residue. If necessary, the facility will repeat all, or part, of the above procedures.
3. A representative sample will be taken of the rinse water from the final rinse of each hazardous waste management unit. These samples will be analyzed for total concentrations of all constituents identified in J-3. The constituents in J-3 are broken down further by compound in Appendix A – Laboratory Analytical Method Detection Limit (MDL)
4. Prior to use, a representative sample of the tap water utilized in the clean up, will be

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analyzed as a blank for the same parameters as the closure samples. If KDHE approves the use of this water, corresponding detectable chemicals of concern from compound table in Appendix J-A may be deducted from the analytical results from each final rinse sample as correction factors (e.g. if tap water sample has 0.1 ug/l 2,4,-D and the rinse water is 0.2 ug/l 2,4,-D, we would subtract 0.1ug/l from the rinse water and get a final value of 0.1ug/l 2,4-D) Use of tap water analytical results as correction factors is subject to prior KDHE approval

5. Except in cases where the Hazardous Waste Debris Rule applies, the equipment will be considered decontaminated when the rinsate sample analysis results are lower than the Tier 2 risk based standards for non-residential ground water found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)", 2010 or the analytical detection level if there is not a corresponding RSK standard.
6. If the unit is not decontaminated after performing Steps 1 through 5, the facility will either repeat the above procedures or dismantle the unit and transport it by a licensed/permitted hauler to an off-site, permitted TSDf for further treatment or disposal.

#### **J-4a(3)(c)      Decontamination of large miscellaneous handling equipment with internal or complicated external parts**

All large equipment with internal and/or complicated external parts that contact waste will be decontaminated in accordance with the following procedures.

1. Surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be triple rinsed. The first wash/rinse will be performed with a high-pressure stream of steam or water with suitable detergents or other cleaning additives. The second wash/rinse will be performed using clean water with cleaning additives. Accumulated solids and liquids from the two first washes will be handled in accordance with section J-4b of this closure plan. The third wash/rinse will be performed with clean water.
2. The equipment will be visually inspected after the triple wash/rinse to assess the presence of visual residue. If necessary the facility will repeat all, or part, of the above procedures.
3. If visible contamination remains, go to Step 6 below. If no visible contamination remains, the facility will take a representative sample of the rinse water from the final rinse of each hazardous waste management unit. These samples will be analyzed for total concentrations of all constituents identified in J-3 are broken down further by compound in Appendix A – Laboratory Analytical Method Detection Limit (MDL)
4. Prior to use, a representative sample of the tap water utilized in the cleanup will be analyzed as a blank for the same parameters as the closure samples. If KDHE

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approves the use of this water, corresponding detectable chemicals of concern from the compound table in Appendix J-A may be deducted from the analytical results from each final rinse sample as correction factors (e.g. if tap water sample has 0.1 µg/l 2,4,-D and the rinse water is 0.2 µg/l 2,4,-D, we would subtract 0.1 µg/l from the rinse water and get a final value of 0.1 µg/l 2,4,-D). Use of tap water analytical results as correction factors is subject to prior KDHE approval.

5. A unit will be considered decontaminated when the rinsate sample analysis results are lower than the Tier 2 risk based standards for non-residential ground water found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)", 2010 or the analytical detection level if there is not a corresponding RSK standard.
6. If after performing the above rinsing procedures, the equipment can not be decontaminated, the equipment will be transported by a licensed/permitted hauler to an off-site, permitted TSDF for further treatment or disposal. Equipment disposed in a landfill will meet the applicable Land Disposal Restriction (LDR) standards of 40 CFR 268.

#### **J-4a(4) Disposal of Cleanup Equipment/Clothing and Residue**

- a. All contaminated equipment used during the cleanup that can't be decontaminated, such as shovels, dustpans and brooms, are shipped to approved KDHE/EPA-disposal facilities in DOT-approved containers or decontaminated using the triple wash/rinse method.
- b. All contaminated clothing, plastic sheets, rags, etc., generated during cleanup that can't be decontaminated, are sent to KDHE/EPA-approved disposal facilities in DOT approved containers.
- c. All hazardous waste residues from the cleanup of areas and equipment will be sent to KDHE/EPA-approved disposal facilities in DOT approved containers.

#### **J-4b Hazardous Waste Handling Procedures**

All contaminated solids, liquids, sludges, soils, and debris generated by the closure process will be managed in accordance with applicable regulations as site generated solid waste (i.e., Clean Harbors Kansas, LLC is the generator). Generated wastes meeting the definition of "hazardous waste" under 40 CFR 261.3 will be handled in the manner discussed below.

Site-generated hazardous wastes may be stored on-site in containers, existing tanks, or temporary portable tanks prior to treatment or removal from the facility. The wastes may be consolidated on-site in accordance with the facility's RCRA/HSWA permit. A temporary storage area may be developed for storage of these generated wastes, and if so, wastes will be stored in this area for less than ninety days. These wastes will then be transported to a permitted off-site Treatment, Storage, or Disposal Facility (TSDF) by a permitted hazardous waste hauler for

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appropriate disposal or further treatment (e.g. landfill, deep-well injection, incineration, cement kiln, recycling facility).

#### **J-5 Maximum Extent of Operations**

Table J.1 lists all hazardous waste management units to be closed under this closure plan existing at the Clean Harbors Kansas, LLC facility. This table represents the maximum extent of operations that are currently planned to be closed at this facility.

#### **J-6 Maximum Waste Inventory**

The units to be closed have been emptied of all waste.

#### **J-7 Schedule for Final Closure**

Table J.3, Closure Activity Schedule – Facility Closure outlines the anticipated schedule for closing the Clean Harbors Kansas, LLC facility.

During closure, hazardous waste management units may be closed simultaneously or sequentially. Also, a temporary storage area may be developed for storage of wastes which are generated on-site during closure activities, and if so, wastes will be stored in this area for less than ninety days in appropriate containers or temporary tanks.

#### **J-7a Expected Year of Closure**

Clean Harbors Kansas, LLC intends to conduct this closure within 180 days after approval of this plan by KDHE.

#### **J-8 Closure Plan Amendment**

Clean Harbors Kansas, LLC maintains a copy of the closure plan at the facility. Clean Harbors Kansas, LLC will submit a written request for approval to change the closure plan, in accordance with 40 CFR 264.112(c) and 40 CFR 270.42, whenever one of the following occurs.

1. Changes in operating plans or facility design affect the closure plan.
2. Change in the estimated year of final closure (see section J-7a).
3. In conducting closure activities, unexpected events occur which affect the closure plan.

This notification will include a copy of the amended closure plan for review or approval by KDHE. It will be submitted at least 60 days prior to the proposed change in facility design or operation or no later than sixty days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the closure period, Clean Harbors Kansas, LLC will submit the notification or request no later than 30 days after the unexpected event's occurrence.

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#### **J-9 Individual Unit Closures**

This section details the closure procedures of each individual hazardous waste management unit. During facility closure each hazardous waste management unit will be closed in accordance with this section.

##### **J-9a Building B, D, and J Closure**

At closure of buildings B, D, and J, all hazardous waste and hazardous waste residues will be removed from the buildings. Remaining containers, liners and bases containing or contaminated with hazardous waste or hazardous waste residues will be either decontaminated or removed.

##### **J-9a(1) Process and Unit Description**

The building B, D, and J at the Clean Harbors Kansas, LLC facility are used for storing and staging containers of hazardous and non-hazardous wastes. The wastes managed in these areas include liquids, sludges, and solids and are managed in containers of varying sizes. The CHK facility manages containerized waste in container management areas, each roofed and constructed with concrete diking to minimize run-on and run-off. Figure J.3, depicts the location of each Hazardous waste management units at the facility.

##### **J-9a(2) Unit Closure Procedures**

For the purposes of this closure plan, each building includes the following structures/equipment:

- Containers, drums, pallets, marino bags, etc., and associated hazardous wastes, waste residues and constituents.
- All associated secondary containment structures (concrete pads, curbs, ramps, etc.).
- Associated equipment (e.g., conveyors, etc.).

During closure operations, the soil beneath containment systems of all hazardous waste management units including buildings will be investigated as follows.

1. Each management unit containment area will be mapped with a grid system. A 25' x 25' grid will be used in material storage areas and a 15' x 15' grid will be used in material processing areas. A soil sample will be taken in the center of each grid. If necessary, concrete borings will be done to sample each required location. Additionally, if a crack exists, a sample will be collected under the crack every 10'. (Note: This does not apply to surface cracks) A sample will also be collected under every sump.
2. Collect samples at soil interface beneath the concrete surface and below the

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underlying subgrade rock where rock exists. Borings for soil samples in non active containment areas will remain open until any additional sampling required by the EPA or KDHE for closure or corrective action purposes at that location has been completed. These samples will be analyzed using SW-846 standard methods, and will be analyzed for total concentrations of all constituents identified in J-3. The constituents in J-3 are broken down further by compound in Appendix J-A— Laboratory Analytical Method Detection Limit (MDL).

3. Proper QA/QC procedures will be followed to control the potential loss of VOCs during sampling and transport.
4. Soil will be considered clean for closure when results of sample analyses are at or below the Tier 2 risk based standards for non-residential soil pathway or the Residential Soil to Ground Water pathway, whichever is lower, found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)" 2010
- 0.
5. If large areas of soil contamination, in excess of closure standards, are identified, a project specific assessment and cleanup plan will be prepared and submitted to the KDHE for approval and subsequent implementation. This will be done in accordance with the permit modification procedures of 40 CFR 270.42. Alternatively, this may be addressed in the site's corrective action program if formally deferred to the corrective action process by the regulatory agencies.
6. KDHE can ask for additional soil samples at any location and depths within the regulatory unit, if staining of soil or other indications of contamination are present.

Clean Harbors Kansas, LLC will close building B, D, and J as follows.

- A. If modifications to the closure plan are desired and have not been previously approved in accordance with 40 CFR 270.42 and 264.112, the modified portions of the plan will not be implemented until approval by KDHE or other authorized agencies has been received.
- B. Clean Harbors Kansas, LLC will close the buildings in accordance with the schedule outlined in Table J.3, Closure Activity Schedule and as discussed in Section J-9a(3) of this closure plan.
- C. All contaminated equipment, structures, and secondary containment systems will be:
  1. Dismantled and disposed as hazardous waste at a RCRA/HSWA permitted off-site disposal facility, or

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2. Decontaminated in accordance with Section J-4a and disposed of at a solid waste landfill, or
  3. Decontaminated in accordance with Section J-4a and either salvaged for future use or left in place.
  4. Successfully decontaminated equipment may be transferred to another TSDF for use.
- D. All wastes generated on-site from closure activities will be handled in accordance with Section J-4b of this closure plan.
- E. Clean Harbors Kansas, LLC will complete closure activities within 180 days after this plan has been approved by KDHE, unless an extension has been requested and approved in accordance with 40 CFR 264.113(b).
- F. The buildings B, D, and J are not disposal units. Also, all hazardous wastes and hazardous waste constituents will be removed from the buildings during closure and all structures will be decontaminated in accordance with this closure plan. If Clean Closure is not achieved, the facility will submit a post-closure plan to the regulatory authority.

#### **J-9a(3) Unit Closure Schedule**

Table J.3 outlines the anticipated schedule for closure of closure of building B, D, and J at the Clean Harbors Kansas, LLC facility.

#### **J-9b Tank System or Miscellaneous Unit Closure**

At closure of a tank or tank system or miscellaneous unit, all hazardous waste and hazardous waste residues will be removed from the unit. Tanks, ancillary equipment and miscellaneous units containing or contaminated with hazardous waste or hazardous waste residues will be either decontaminated or removed.

#### **J-9b(1) Process and Unit Description**

The tanks miscellaneous units used at Clean Harbors Kansas, LLC vary in size. All hazardous waste management units operating under this permit have secondary containment designed, installed, and operated to prevent migration of wastes or accumulated liquid to the environment.

These containment systems, consisting of concrete slabs surrounded by concrete walls or dikes of varying height, enable the detection of and collection of releases and accumulated liquids. The concrete containment liner is also maintained free from cracks and gaps.

These units are summarized in Table J.1. In addition, Figure J.3, shows the location of each

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tank or miscellaneous unit to be closed at the facility

**J-9b(2)      Unit Closure Procedures**

For the purposes of this closure plan, each tank system or miscellaneous unit includes:

- Tanks and associated hazardous wastes, waste residues and constituents;
- All ancillary equipment including, but not limited to, piping, fittings, flanges, valves, and pumps; and
- All associated secondary containment structures (concrete pads, curbs, ramps, etc.).  
Note: V26, V34 and V35 are in a containment area that will remain in use to provide containment for existing tanks. This containment area is not subject to decontamination per this closure plan.

V17 is permitted as a hazardous waste tank. It is used for gasoline product and has never been used for waste. This tank was inappropriately permitted as a hazardous waste tank. It will be emptied of product and triple washed. After the triple wash process, the tank will be considered decontaminated and will be put back in service to store product.

During closure operations, the soil beneath containment systems of all hazardous waste management units will be investigated as follows.

1. Each management unit containment area will be mapped with a grid system. A 25' x 25' grid will be used in material storage areas and a 15' x 15' grid will be used in material processing areas. A soil sample will be taken in the center of each grid. If necessary, concrete borings will be done to sample each required location. Additionally, if a crack exists, a sample will be collected under the crack every 10'. (Note: This does not apply to surface cracks) A sample will also be collected under every sump.
2. Collect samples at soil interface beneath the concrete surface and below the underlying subgrade rock where rock exists. and analyze using SW-846 standard methods for the parameters identified in Appendix A. Borings for soil samples in non active containment areas will remain open until any additional sampling required by the EPA or KDHE for closure or corrective action purposes at that location has been completed.
3. Proper QA/QC procedures will be followed to control the potential loss of VOCs during sampling and transport.
4. For closure, Soil will be considered clean for closure when results of sample

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analyses are at or below the Tier 2 risk based standards for non-residential soil pathway or the Residential Soil to Ground Water pathway, whichever is lower, found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)" 2010

5. If large areas of soil contamination, in excess of closure standards, are identified, a project specific assessment and cleanup plan will be prepared and submitted to the KDHE for approval and subsequent implementation. This will be done in accordance with the permit modification procedures of 40 CFR 270.42. Alternatively, this may be addressed in the site's corrective action program if formally deferred to the corrective action process by the regulatory agencies..
6. KDHE can ask for additional soil samples at any location and depths within the regulatory unit, if staining of soil or other indications of contamination are present.

Clean Harbors Kansas, LLC will close building B, D, and J and any tank system or miscellaneous unit contained in those buildings as follows.

- A. If modifications to the closure plan are desired and have not been previously approved in accordance with 40 CFR 270.42 and 264.112, the modified portions of the plan will not be implemented until approval by KDHE or other authorized agencies has been received.
- B. Clean Harbors Kansas, LLC will close the buildings in accordance with the schedule outlined in Table J.3, Closure Activity Schedule and as discussed in Section J-9a(3) of this closure plan.
- C. All contaminated equipment, structures, and secondary containment systems will be:
  1. Dismantled and disposed as hazardous waste at a RCRA/HSWA permitted off-site disposal facility, or
  2. Decontaminated in accordance with Section J-4a and disposed of at a solid waste landfill, or
  3. Decontaminated in accordance with Section J-4a and either salvaged for future use or left in place.
  4. Successfully decontaminated equipment may be transferred to another TSD facility for use.

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- D. All wastes generated on-site from closure activities will be handled in accordance with Section J-4b of this closure plan.
- E. Clean Harbors Kansas, LLC will complete closure activities within 180 days after this plan has been approved by KDHE, unless an extension has been requested and approved in accordance with 40 CFR 264.113(b).
- F. The buildings B, D, and J are not disposal units. Also, all hazardous wastes and hazardous waste constituents will be removed from the buildings during closure and all structures will be decontaminated in accordance with this closure plan. Therefore, the buildings B, D, and J are not subject to the post-closure care requirements of 40 CFR 264.116 through 264.120.

The following sequence of work events will be implemented at each tank location:

- Visually inspect the tank location in relation to overhead utilities, adjacent utilities, building load bearing supports, present of contamination and electrical components and make the necessary plans to remove or work around in a safe manner.
- Position the scissors lift below and adjacent to the tank and place personnel and equipment into the scissors lift platform
- Secure/Harness all personnel and equipment a required.
- Lift the necessary manpower and equipment to the top of the tank.
- Remove any non-structural or non building supporting structures which may be impeding the tank removal.
- Open the tank via the man way.
- Monitor the inside gas vapors and implement the necessary purging procedures previous to arc weld cutting.
- Make initial cut into a  $\frac{1}{4}$  section of the tank and secure a hook via the boom
- Continue to cut the  $\frac{1}{4}$  section of the tank until it has separated from the remaining  $\frac{3}{4}$  section of the tank.
- Lower the entire  $\frac{1}{4}$  section of the tank to the ground surface

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- Continue to cut the  $\frac{1}{4}$  section of the tank into manageable piece on the ground surface utilizing the boom as necessary to prevent free falling pieces.
- Continue the above process for the remaining  $\frac{3}{4}$  section of tank removing  $\frac{1}{4}$  section sections a time and lowering to the ground surface.
- When sufficient pieces have accumulated on the ground surface, load the tank pieces onto the flat bed truck with the skid steer/fork lift.
- Dispatch the truck to the local metal recycling facility.
- Maintain accurate records of truck net weights of metal.
- Continue the above process for all inside tanks

#### **J-9b(3)      Unit Closure Schedule**

Table J.3 outlines the anticipated schedule for the closure of a tank/tank system at the Clean Harbors Kansas, LLC facility.

#### **J-10      Certification of Closure**

Within 60 days of final closure completion, Clean Harbors Kansas, LLC will submit, either by hand delivery or by registered mail, a certification of closure to KDHE and to the Regional Administrator of the USEPA, Region 7 per 40 CFR 264.115. The certification will be signed by CHK, as the owner/operator of the facility and by an independent Kansas registered professional engineer attesting that the units were closed in accordance with this closure plan.

#### **J-11      Closure Report**

Within 60 days of final closure completion, Clean Harbors Kansas, LLC will submit, either by hand delivery or by registered mail, the Closure report to KDHE and to the Regional Administrator of the USEPA, Region 7 . The final closure report will include the following as applicable to each area being closed:

- Site history information;
- A map of the site indicating the location of the units being closed;
- Visual observation made at the time of closure with respect to condition of the units;
- Documentation of the methods used to clean/decontaminate the units;
- Photographs associated with the closure of the units (before, during, and after closure) used in conjunction with written documentation;

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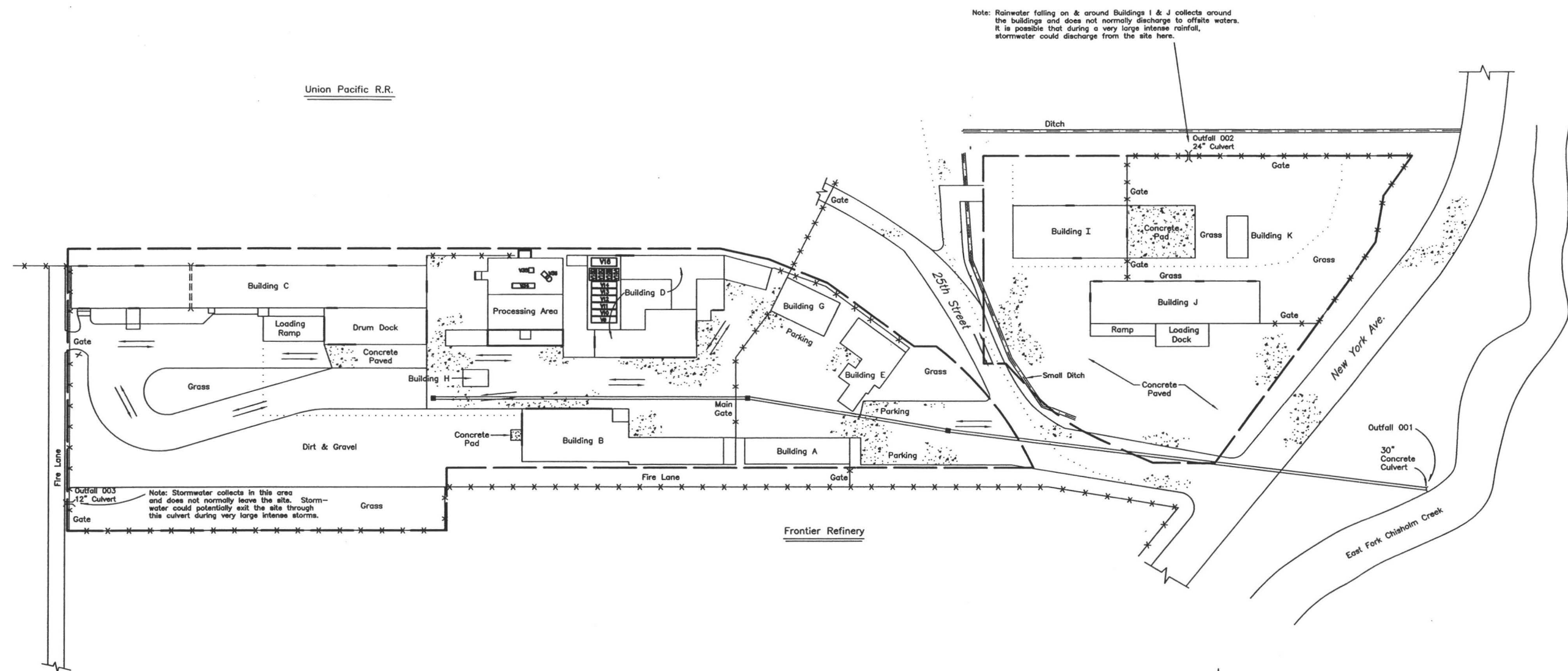
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- The volume of waste and waste residue removed, including the waste (residue) resulting from decontamination activities;
- A description of the method of waste handling and transport;
- Waste manifest numbers or copies of manifests from the removal of waste and waste residues;
- A description of the sampling and analytical methods used, including sample preservation and chain of custody methods;
- Laboratory records;
- A narrative description of the closure field tasks performed;
- A chronological field log of closure activities;
- Tests performed and methods;
- Location of the sampling points;
- Results of laboratory analyses, summarized in a tabular format and with the laboratory reports as an appendix;
- Documentation of off-site disposal for any materials taken off-site; and,
- A brief description of the current regulatory status and operations at the site
- A comparison of the results of laboratory analyses with the performance standards for clean closure

#### **J-12 Requirements for Kansas Engineer**

An independent Kansas registered professional engineer must be present at all sampling events and must also certify the closure report and the closure certification. The engineer must have relative experience with closure operations. The Engineering will have experience similar to the example resume in Appendix B.

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#### Building Legend

|                 |                                     |
|-----------------|-------------------------------------|
| Building A      | Laboratory/Administration           |
| Building C      | Hazardous Waste Management Building |
| Building E      | Administration                      |
| Building G      | Personnel Decon/Break Room          |
| Building H      | Operations Office                   |
| Building I      | Hazardous Waste Management Building |
| Processing Area | Hazardous Waste Management Area     |
| Drum Dock       | Hazardous Waste Management Area     |

#### Legend:

|           |                                    |
|-----------|------------------------------------|
| +++++     | Railroad Tracks                    |
| -x-x-     | Fence                              |
| - - -     | Property Line                      |
| =====     | Loading and Unloading Area         |
| =====     | Secondary Containment Berm or Wall |
| [Pattern] | Pavement                           |
| .....     | Drainage Boundary                  |
| ■         | Storm Drain Catch Basins           |
| =====     | Underground Storm Sewer Line       |
| =====     | Truck Routes                       |

#### Notes:

- TANKS & MISCELLANEOUS UNIT LOCATIONS SUBJECT TO CLOSURE ARE IDENTIFIED IN THE PROCESSING AREA AND BUILDING D.
- CONTAINER MANAGEMENT UNITS SUBJECT TO CLOSURE INCLUDE:  
BUILDING B  
BUILDING D  
BUILDING J

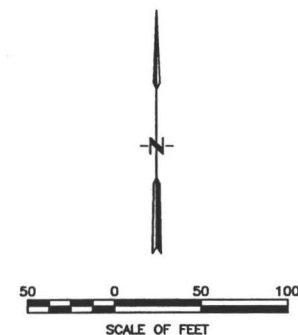


FIGURE J-3

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**APPENDIX JC-A**

**TABLES**

**Appendix J-B**  
**Example Engineer Resume**

**TABLE J-C.1**

**EXTENT OF OPERATIONS**

**CLEAN HARBORS KANSAS, LLC - HAZARDOUS WASTE MANAGEMENT UNITS**

| <u>HWMU</u> | <u>UNIT</u> | <u>Wastes Stored/Function</u>          |
|-------------|-------------|--|
| C           | Building B  | Hazardous waste - Container Management |
| C           | Building D  | Hazardous waste - Container Management |
| C           | Building J  | Hazardous waste - Container Management |
| T           | V-9         | Hazardous Waste Liquid                 |
| T           | V-10        | Hazardous Waste Liquid                 |
| T           | V-11        | Hazardous Waste Liquid                 |
| T           | V-12        | Hazardous Waste Liquid                 |
| T           | V-13        | Hazardous Waste Liquid                 |
| T           | V-14        | Hazardous Waste Liquid                 |
| T           | V-15A       | Hazardous Waste Liquid                 |
| T           | V-15B       | Hazardous Waste Liquid                 |
| T           | V-15C       | Hazardous Waste Liquid                 |
| T           | V-15D       | Hazardous Waste Liquid                 |
| T           | V-16        | Hazardous Waste Liquid                 |
| T           | V-17        | Hazardous Waste Liquid                 |
| T           | V-26        | Hazardous Waste Liquid                 |
| M           | V-26        | Hazardous Waste Liquid                 |
| M           | V-34        | Hazardous Waste Liquid                 |
| M           | V-35        | Hazardous Waste Liquid                 |

Note: V26 is permitted as a tank and a miscellaneous unit. There is only 1 unit permitted both as a tank and miscellaneous unit.

**TABLE J-C.3**

**CLOSURE ACTIVITY SCHEDULE - FACILITY CLOSURE**

| <u>Calendar Days Lapsed</u> | <u>Closure Activity</u>   |
|-----------------------------|---|
| 0                           | Closure Plan approved by KDHE   |
| 120                         | Complete decontamination of tanks, miscellaneous and container management units. Collect and Analyze rinsate and water samples.   |
| 150                         | Complete dismantling/removal of all generated wastes, temporary storage units, and decontaminated tanks, equipment, and structures (if removal is necessary). Collect and Analyze rinsate and soil samples. |
| 180                         | Complete final closure activities.  |
| 200                         | Inspection of facility by a Professional Engineer.  |
| 240                         | Submit a certification of closure to KDHE or the EPA Region 7 Administrator.  |

**Clean Harbors Kansas, LLC  
Section J  
Closure Plan  
Appendix J-A - Tables**

**APPENDIX J-A**

**TABLES**

**May 10,2011  
Revision No. 14**



Compound List Report  
Product: AB8270STD Semivolatiles  
Matrix: AQ Aqueous

Method List: AB8270 AQ  
Report List: AB8270 ALL  
RL/MDL Factor: 1

Method Ref: SW846 8270D  
ABN Full List

| Compound                    | CAS No.   | RL | MDL       | Units | Control Limits (%) |     | Rev: 10/23/10 |     |
|-----------------------------|-----------|----|-----------|-------|--------------------|-----|---------------|-----|
|                             |           |    |           |       | MS/MSD             | RPD | BS            | DUP |
| Benzoic Acid                | 65-85-0   | 50 | 10 ug/l   |       | 10-150             |     | 40 10-150     | 40  |
| 2-Chlorophenol              | 95-57-8   | 5  | 0.5 ug/l  |       | 44-103             |     | 29 44-103     | 29  |
| 4-Chloro-3-methyl phenol    | 59-50-7   | 5  | 0.5 ug/l  |       | 53-105             |     | 24 53-105     | 24  |
| 2,4-Dichlorophenol          | 120-83-2  | 5  | 0.5 ug/l  |       | 53-108             |     | 26 53-108     | 26  |
| 2,4-Dimethylphenol          | 105-67-9  | 5  | 1.1 ug/l  |       | 37-91              |     | 28 37-91      | 28  |
| 2,4-Dinitrophenol           | 51-28-5   | 25 | 10 ug/l   |       | 37-111             |     | 30 37-111     | 30  |
| 4,6-Dinitro-o-cresol        | 534-52-1  | 10 | 2 ug/l    |       | 62-115             |     | 26 62-115     | 26  |
| 2-Methylphenol              | 95-48-7   | 5  | 0.54 ug/l |       | 35-91              |     | 30 35-91      | 30  |
| 3&4-Methylphenol            |           | 5  | 1.1 ug/l  |       | 32-85              |     | 29 32-85      | 29  |
| 2-Nitrophenol               | 88-75-5   | 5  | 0.54 ug/l |       | 49-111             |     | 30 49-111     | 30  |
| 4-Nitrophenol               | 100-02-7  | 25 | 5 ug/l    |       | 13-55              |     | 31 13-55      | 31  |
| Pentachlorophenol           | 87-86-5   | 25 | 5.4 ug/l  |       | 57-118             |     | 26 57-118     | 26  |
| Phenol                      | 108-95-2  | 5  | 0.5 ug/l  |       | 13-54              |     | 34 13-54      | 34  |
| 2,4,5-Trichlorophenol       | 95-95-4   | 5  | 0.5 ug/l  |       | 59-106             |     | 23 59-106     | 23  |
| 2,4,6-Trichlorophenol       | 88-06-2   | 5  | 0.5 ug/l  |       | 58-107             |     | 24 58-107     | 24  |
| Acenaphthene                | 83-32-9   | 5  | 0.5 ug/l  |       | 58-106             |     | 21 58-106     | 21  |
| Acenaphthylene              | 208-96-8  | 5  | 0.5 ug/l  |       | 58-105             |     | 21 58-105     | 21  |
| Aniline                     | 62-53-3   | 5  | 0.52 ug/l |       | 43-98              |     | 28 43-98      | 28  |
| Anthracene                  | 120-12-7  | 5  | 0.5 ug/l  |       | 65-108             |     | 19 65-108     | 19  |
| Benzo(a)anthracene          | 92-87-5   | 25 | 4.7 ug/l  |       | 15-73              |     | 23 15-73      | 23  |
| Benzo(a)pyrene              | 56-55-3   | 5  | 0.5 ug/l  |       | 63-111             |     | 19 63-111     | 19  |
| Benzo(b)fluoranthene        | 50-32-8   | 5  | 0.5 ug/l  |       | 62-106             |     | 20 62-106     | 20  |
| Benzo(g,h,i)perylene        | 205-99-2  | 5  | 0.5 ug/l  |       | 63-109             |     | 20 63-109     | 20  |
| Benzo(k)fluoranthene        | 191-24-2  | 5  | 0.5 ug/l  |       | 61-111             |     | 21 61-111     | 21  |
| 4-Bromophenyl phenyl ether  | 207-08-9  | 5  | 0.5 ug/l  |       | 64-111             |     | 20 64-111     | 20  |
| Butyl benzyl phthalate      | 101-55-3  | 5  | 0.5 ug/l  |       | 64-107             |     | 20 64-107     | 20  |
| Benzyl Alcohol              | 85-68-7   | 5  | 1.1 ug/l  |       | 59-114             |     | 20 59-114     | 20  |
| 2-Chloronaphthalene         | 100-51-6  | 5  | 1 ug/l    |       | 34-98              |     | 27 34-98      | 27  |
| 4-Chloroaniline             | 91-58-7   | 5  | 0.5 ug/l  |       | 54-105             |     | 24 54-105     | 24  |
| Carbazole                   | 106-47-8  | 5  | 0.5 ug/l  |       | 53-103             |     | 22 53-103     | 22  |
| Chrysene                    | 86-74-8   | 5  | 0.5 ug/l  |       | 66-109             |     | 20 66-109     | 20  |
| bis(2-Chloroethoxy)methane  | 218-01-9  | 5  | 0.5 ug/l  |       | 64-111             |     | 19 64-111     | 19  |
| bis(2-Chloroethyl)ether     | 111-91-1  | 5  | 0.5 ug/l  |       | 48-101             |     | 28 48-101     | 28  |
| bis(2-Chloroisopropyl)ether | 111-44-4  | 5  | 0.54 ug/l |       | 51-108             |     | 27 51-108     | 27  |
| 4-Chlorophenyl phenyl ether | 108-60-1  | 5  | 0.54 ug/l |       | 43-106             |     | 27 43-106     | 27  |
| 1,2-Dichlorobenzene         | 7005-72-3 | 5  | 0.5 ug/l  |       | 61-107             |     | 20 61-107     | 20  |
| 1,2-Diphenylhydrazine       | 95-50-1   | 5  | 1 ug/l    |       | 41-102             |     | 28 41-102     | 28  |
| 1,3-Dichlorobenzene         | 122-66-7  | 5  | 0.5 ug/l  |       | 61-110             |     | 20 61-110     | 20  |
| 1,4-Dichlorobenzene         | 541-73-1  | 5  | 1 ug/l    |       | 38-100             |     | 28 38-100     | 28  |
| 2,4-Dinitrotoluene          | 106-46-7  | 5  | 1 ug/l    |       | 40-100             |     | 28 40-100     | 28  |
|                             | 121-14-2  | 5  | 0.5 ug/l  |       | 60-109             |     | 20 60-109     | 20  |

|                            |           |    |           |                   |           |    |
|----------------------------|-----------|----|-----------|-------------------|-----------|----|
| 2,6-Dinitrotoluene         | 606-20-2  | 5  | 0.5 ug/l  | 58-104            | 21 58-104 | 21 |
| 3,3'-Dichlorobenzidine     | 91-94-1   | 10 | 1 ug/l    | 57-105            | 25 57-105 | 25 |
| Dibenzo(a,h)anthracene     | 53-70-3   | 5  | 0.52 ug/l | 62-112            | 20 62-112 | 20 |
| Dibenzofuran               | 132-64-9  | 5  | 0.5 ug/l  | 61-108            | 20 61-108 | 20 |
| Di-n-butyl phthalate       | 84-74-2   | 5  | 0.87 ug/l | 62-109            | 20 62-109 | 20 |
| Di-n-octyl phthalate       | 117-84-0  | 5  | 1.1 ug/l  | 60-120            | 24 60-120 | 24 |
| Diethyl phthalate          | 84-66-2   | 5  | 1.1 ug/l  | 62-109            | 19 62-109 | 19 |
| Dimethyl phthalate         | 131-11-3  | 5  | 0.99 ug/l | 63-106            | 19 63-106 | 19 |
| bis(2-Ethylhexyl)phthalate | 117-81-7  | 5  | 1.1 ug/l  | 59-116            | 21 59-116 | 21 |
| Fluoranthene               | 206-44-0  | 5  | 0.5 ug/l  | 65-114            | 21 65-114 | 21 |
| Fluorene                   | 86-73-7   | 5  | 0.5 ug/l  | 61-106            | 19 61-106 | 19 |
| Hexachlorobenzene          | 118-74-1  | 5  | 0.56 ug/l | 62-107            | 20 62-107 | 20 |
| Hexachlorobutadiene        | 87-68-3   | 5  | 1 ug/l    | 38-107            | 30 38-107 | 30 |
| Hexachlorocyclopentadiene  | 77-47-4   | 10 | 1.9 ug/l  | 19-84             | 35 19-84  | 35 |
| Hexachloroethane           | 67-72-1   | 5  | 1 ug/l    | 35-101            | 29 35-101 | 29 |
| Indeno(1,2,3-cd)pyrene     | 193-39-5  | 5  | 0.5 ug/l  | 61-113            | 20 61-113 | 20 |
| Isophorone                 | 78-59-1   | 5  | 0.5 ug/l  | 56-111            | 26 56-111 | 26 |
| 1-Methylnaphthalene        | 90-12-0   | 5  | 0.5 ug/l  | 52-102            | 25 52-102 | 25 |
| 2-Methylnaphthalene        | 91-57-6   | 5  | 0.57 ug/l | 56-112            | 26 56-112 | 26 |
| 2-Nitroaniline             | 88-74-4   | 5  | 0.5 ug/l  | 60-109            | 20 60-109 | 20 |
| 3-Nitroaniline             | 99-09-2   | 5  | 0.5 ug/l  | 52-107            | 21 52-107 | 21 |
| 4-Nitroaniline             | 100-01-6  | 5  | 0.5 ug/l  | 59-111            | 21 59-111 | 21 |
| Naphthalene                | 91-20-3   | 5  | 0.8 ug/l  | 50-104            | 28 50-104 | 28 |
| Nitrobenzene               | 98-95-3   | 5  | 0.59 ug/l | 52-105            | 28 52-105 | 28 |
| N-Nitrosodimethylamine     | 62-75-9   | 5  | 2.4 ug/l  | 20-71             | 32 20-71  | 32 |
| N-Nitroso-di-n-propylamine | 621-64-7  | 5  | 0.5 ug/l  | 51-104            | 28 51-104 | 28 |
| N-Nitrosodiphenylamine     | 86-30-6   | 5  | 1 ug/l    | 57-110            | 19 57-110 | 19 |
| Phenanthrene               | 85-01-8   | 5  | 0.5 ug/l  | 65-108            | 20 65-108 | 20 |
| Pyrene                     | 129-00-0  | 5  | 0.5 ug/l  | 60-113            | 20 60-113 | 20 |
| Pyridine                   | 110-86-1  | 10 | 1.6 ug/l  | 15-67             | 40 15-67  | 40 |
| 1,2,4-Trichlorobenzene     | 120-82-1  | 5  | 0.5 ug/l  | 45-104            | 28 45-104 | 28 |
| 2-Fluorophenol             | 367-12-4  |    |           | Surrogate Limits: | 14-62     |    |
| Phenol-d5                  | 4165-62-2 |    |           | Surrogate Limits: | Oct-40    |    |
| 2,4,6-Tribromophenol       | 118-79-6  |    |           | Surrogate Limits: | 33-118    |    |
| Nitrobenzene-d5            | 4165-60-0 |    |           | Surrogate Limits: | 42-108    |    |
| 2-Fluorobiphenyl           | 321-60-8  |    |           | Surrogate Limits: | 40-106    |    |
| Terphenyl-d14              | 1718-51-0 |    |           | Surrogate Limits: | 39-121    |    |

72 compounds and 6 surrogates reported in list AB8270

## AB8270STD solid

| Compound                    | CAS No.   | RL   | MDL | Units | MS/MSD | RPD | BS        | DUP |
|-----------------------------|-----------|------|-----|-------|--------|-----|-----------|-----|
| Benzoic Acid                | 65-85-0   | 830  | 290 | ug/kg | 44-116 |     | 36 44-116 | 36  |
| 2-Chlorophenol              | 95-57-8   | 170  | 17  | ug/kg | 54-97  |     | 31 54-97  | 31  |
| 4-Chloro-3-methyl phenol    | 59-50-7   | 170  | 17  | ug/kg | 59-102 |     | 27 59-102 | 27  |
| 2,4-Dichlorophenol          | 120-83-2  | 170  | 17  | ug/kg | 60-101 |     | 30 60-101 | 30  |
| 2,4-Dimethylphenol          | 105-67-9  | 170  | 21  | ug/kg | 49-89  |     | 31 49-89  | 31  |
| 2,4-Dinitrophenol           | 51-28-5   | 830  | 330 | ug/kg | 39-107 |     | 40 39-107 | 40  |
| 4,6-Dinitro-o-cresol        | 534-52-1  | 330  | 67  | ug/kg | 58-109 |     | 37 58-109 | 37  |
| 2-Methylphenol              | 95-48-7   | 170  | 17  | ug/kg | 53-94  |     | 29 53-94  | 29  |
| 3&4-Methylphenol            |           | 170  | 24  | ug/kg | 54-95  |     | 31 54-95  | 31  |
| 2-Nitrophenol               | 88-75-5   | 170  | 17  | ug/kg | 55-96  |     | 30 55-96  | 30  |
| 4-Nitrophenol               | 100-02-7  | 830  | 130 | ug/kg | 56-106 |     | 29 56-106 | 29  |
| Pentachlorophenol           | 87-86-5   | 830  | 200 | ug/kg | 50-115 |     | 33 50-115 | 33  |
| Phenol                      | 108-95-2  | 170  | 17  | ug/kg | 55-99  |     | 28 55-99  | 28  |
| 2,4,5-Trichlorophenol       | 95-95-4   | 170  | 17  | ug/kg | 60-101 |     | 28 60-101 | 28  |
| 2,4,6-Trichlorophenol       | 88-06-2   | 170  | 17  | ug/kg | 60-100 |     | 27 60-100 | 27  |
| Acenaphthene                | 83-32-9   | 170  | 17  | ug/kg | 59-97  |     | 29 59-97  | 29  |
| Acenaphthylene              | 208-96-8  | 170  | 17  | ug/kg | 58-98  |     | 30 58-98  | 30  |
| Aniline                     | 62-53-3   | 170  | 33  | ug/kg | 38-92  |     | 38 38-92  | 38  |
| Anthracene                  | 120-12-7  | 170  | 17  | ug/kg | 61-104 |     | 29 61-104 | 29  |
| Benzidine                   | 92-87-5   | 1700 | 330 | ug/kg | 10-151 |     | 50 10-156 |     |
| Benzo(a)anthracene          | 56-55-3   | 170  | 17  | ug/kg | 60-106 |     | 31 60-106 | 31  |
| Benzo(a)pyrene              | 50-32-8   | 170  | 17  | ug/kg | 59-102 |     | 32 59-102 | 32  |
| Benzo(b)fluoranthene        | 205-99-2  | 170  | 17  | ug/kg | 60-107 |     | 31 60-107 | 31  |
| Benzo(g,h,i)perylene        | 191-24-2  | 170  | 17  | ug/kg | 56-103 |     | 32 56-103 | 32  |
| Benzo(k)fluoranthene        | 207-08-9  | 170  | 17  | ug/kg | 61-107 |     | 30 61-107 | 30  |
| 4-Bromophenyl phenyl ether  | 101-55-3  | 170  | 17  | ug/kg | 60-104 |     | 26 60-104 | 26  |
| Butyl benzyl phthalate      | 85-68-7   | 170  | 33  | ug/kg | 57-110 |     | 28 57-110 | 28  |
| Benzyl Alcohol              | 100-51-6  | 170  | 33  | ug/kg | 51-102 |     | 34 51-102 | 34  |
| 2-Chloronaphthalene         | 91-58-7   | 170  | 33  | ug/kg | 57-95  |     | 28 57-95  | 28  |
| 4-Chloroaniline             | 106-47-8  | 170  | 17  | ug/kg | 19-85  |     | 34 19-85  | 34  |
| Carbazole                   | 86-74-8   | 170  | 17  | ug/kg | 60-106 |     | 30 60-106 | 30  |
| Chrysene                    | 218-01-9  | 170  | 17  | ug/kg | 60-107 |     | 31 60-107 | 31  |
| bis(2-Chloroethoxy)methane  | 111-91-1  | 170  | 17  | ug/kg | 51-89  |     | 30 51-89  | 30  |
| bis(2-Chloroethyl)ether     | 111-44-4  | 170  | 17  | ug/kg | 50-96  |     | 33 50-96  | 33  |
| bis(2-Chloroisopropyl)ether | 108-60-1  | 170  | 17  | ug/kg | 44-94  |     | 32 44-94  | 32  |
| 4-Chlorophenyl phenyl ether | 7005-72-3 | 170  | 17  | ug/kg | 60-101 |     | 26 60-101 | 26  |
| 1,2-Dichlorobenzene         | 95-50-1   | 170  | 33  | ug/kg | 47-91  |     | 35 47-91  | 35  |
| 1,2-Diphenylhydrazine       | 122-66-7  | 170  | 17  | ug/kg | 58-104 |     | 27 58-104 | 27  |
| 1,3-Dichlorobenzene         | 541-73-1  | 170  | 33  | ug/kg | 45-86  |     | 36 45-86  | 36  |
| 1,4-Dichlorobenzene         | 106-46-7  | 170  | 33  | ug/kg | 45-88  |     | 36 45-88  | 36  |
| 2,4-Dinitrotoluene          | 121-14-2  | 170  | 17  | ug/kg | 59-103 |     | 30 59-103 | 30  |
| 2,6-Dinitrotoluene          | 606-20-2  | 170  | 20  | ug/kg | 57-99  |     | 30 57-99  | 30  |
| 3,3'-Dichlorobenzidine      | 91-94-1   | 330  | 33  | ug/kg | 34-88  |     | 31 34-88  | 31  |
| Dibenzo(a,h)anthracene      | 53-70-3   | 170  | 17  | ug/kg | 57-105 |     | 29 57-105 | 29  |
| Dibenzofuran                | 132-64-9  | 170  | 17  | ug/kg | 58-103 |     | 27 58-103 | 27  |
| Di-n-butyl phthalate        | 84-74-2   | 330  | 67  | ug/kg | 59-105 |     | 27 59-105 | 27  |
| Di-n-octyl phthalate        | 117-84-0  | 170  | 33  | ug/kg | 59-117 |     | 28 59-117 | 28  |
| Diethyl phthalate           | 84-66-2   | 330  | 67  | ug/kg | 59-106 |     | 27 59-106 | 27  |

|                            |           |     |          |                   |           |    |
|----------------------------|-----------|-----|----------|-------------------|-----------|----|
| Dimethyl phthalate         | 131-11-3  | 170 | 33 ug/kg | 60-100            | 26 60-100 | 26 |
| bis(2-Ethylhexyl)phthalate | 117-81-7  | 330 | 67 ug/kg | 57-111            | 29 57-111 | 29 |
| Fluoranthene               | 206-44-0  | 170 | 17 ug/kg | 60-110            | 32 60-110 | 32 |
| Fluorene                   | 86-73-7   | 170 | 17 ug/kg | 60-99             | 30 60-99  | 30 |
| Hexachlorobenzene          | 118-74-1  | 170 | 17 ug/kg | 58-103            | 27 58-103 | 27 |
| Hexachlorobutadiene        | 87-68-3   | 170 | 33 ug/kg | 49-95             | 33 49-95  | 33 |
| Hexachlorocyclopentadiene  | 77-47-4   | 170 | 73 ug/kg | 36-94             | 41 36-94  | 41 |
| Hexachloroethane           | 67-72-1   | 170 | 33 ug/kg | 44-89             | 38 44-89  | 38 |
| Indeno(1,2,3-cd)pyrene     | 193-39-5  | 170 | 17 ug/kg | 57-104            | 33 57-104 | 33 |
| Isophorone                 | 78-59-1   | 170 | 17 ug/kg | 58-97             | 30 58-97  | 30 |
| 1-Methylnaphthalene        | 90-12-0   | 170 | 17 ug/kg | 55-93             | 33 55-93  | 33 |
| 2-Methylnaphthalene        | 91-57-6   | 170 | 17 ug/kg | 57-103            | 32 57-103 | 32 |
| 2-Nitroaniline             | 88-74-4   | 170 | 33 ug/kg | 53-106            | 29 53-106 | 29 |
| 3-Nitroaniline             | 99-09-2   | 170 | 33 ug/kg | 29-85             | 31 29-85  | 31 |
| 4-Nitroaniline             | 100-01-6  | 170 | 33 ug/kg | 49-104            | 31 49-104 | 31 |
| Naphthalene                | 91-20-3   | 170 | 27 ug/kg | 54-93             | 32 54-93  | 32 |
| Nitrobenzene               | 98-95-3   | 170 | 17 ug/kg | 53-92             | 32 53-92  | 32 |
| N-Nitrosodimethylamine     | 62-75-9   | 330 | 70 ug/kg | 37-88             | 34 37-88  | 34 |
| N-Nitroso-di-n-propylamine | 621-64-7  | 170 | 17 ug/kg | 49-94             | 28 49-94  | 28 |
| N-Nitrosodiphenylamine     | 86-30-6   | 170 | 17 ug/kg | 53-107            | 28 53-107 | 28 |
| Phenanthrene               | 85-01-8   | 170 | 17 ug/kg | 61-103            | 32 61-103 | 32 |
| Pyrene                     | 129-00-0  | 170 | 17 ug/kg | 58-109            | 33 58-109 | 33 |
| Pyridine                   | 110-86-1  | 330 | 67 ug/kg | 30-68             | 38 30-68  | 38 |
| 1,2,4-Trichlorobenzene     | 120-82-1  | 170 | 17 ug/kg | 52-93             | 32 52-93  | 32 |
| 2-Fluorophenol             | 367-12-4  |     |          | Surrogate Limits: | 40-102    |    |
| Phenol-d5                  | 4165-62-2 |     |          | Surrogate Limits: | 41-100    |    |
| 2,4,6-Tribromophenol       | 118-79-6  |     |          | Surrogate Limits: | 42-108    |    |
| Nitrobenzene-d5            | 4165-60-0 |     |          | Surrogate Limits: | 40-105    |    |
| 2-Fluorobiphenyl           | 321-60-8  |     |          | Surrogate Limits: | 43-107    |    |
| Terphenyl-d14              | 1718-51-0 |     |          | Surrogate Limits: | 45-119    |    |

72 compounds and 6 surrogates reported in list AB8270

Compound List Report  
 Product: P8081PESTTCL Pesticides, TCL  
 Matrix: SO Solid

Method List: P8081 SO  
 Report List: PTCL ALL  
 RL/MDL Factor: 0.33

Method Ref: SW846 8081B  
 Pesticide TCL List

LF17812  
 LJ1046

| Compound             | CAS No.    | RL  | MDL  | Units | Control Limits (%) Rev: 07/31/08 |     |        |     |
|----------------------|------------|-----|------|-------|----------------------------------|-----|--------|-----|
|                      |            |     |      |       | MS/MSD                           | RPD | BS     | DUP |
| Aldrin               | 309-00-2   | 1.7 | 0.43 | ug/kg | 57-118                           | 27  | 57-118 | 27  |
| alpha-BHC            | 319-84-6   | 1.7 | 0.36 | ug/kg | 65-116                           | 23  | 65-116 | 23  |
| beta-BHC             | 319-85-7   | 1.7 | 0.36 | ug/kg | 63-124                           | 20  | 63-124 | 20  |
| delta-BHC            | 319-86-8   | 1.7 | 0.33 | ug/kg | 41-127                           | 25  | 41-127 | 25  |
| gamma-BHC (Lindane)  | 58-89-9    | 1.7 | 0.4  | ug/kg | 68-121                           | 22  | 68-121 | 22  |
| alpha-Chlordane      | 5103-71-9  | 1.7 | 0.36 | ug/kg | 69-120                           | 33  | 69-120 | 28  |
| gamma-Chlordane      | 5103-74-2  | 1.7 | 0.36 | ug/kg | 70-123                           | 34  | 70-123 | 34  |
| Dieldrin             | 60-57-1    | 1.7 | 0.36 | ug/kg | 69-122                           | 25  | 69-122 | 25  |
| 4,4'-DDD             | 72-54-8    | 3.3 | 0.43 | ug/kg | 63-135                           | 28  | 63-135 | 28  |
| 4,4'-DDE             | 72-55-9    | 3.3 | 0.4  | ug/kg | 66-127                           | 28  | 66-127 | 28  |
| 4,4'-DDT             | 50-29-3    | 3.3 | 0.43 | ug/kg | 66-142                           | 28  | 66-142 | 28  |
| Endrin               | 72-20-8    | 3.3 | 0.4  | ug/kg | 69-135                           | 24  | 69-135 | 24  |
| Endosulfan sulfate   | 1031-07-8  | 3.3 | 0.36 | ug/kg | 61-126                           | 25  | 61-126 | 25  |
| Endrin aldehyde      | 7421-93-4  | 3.3 | 0.43 | ug/kg | 5-113                            | 30  | 5-113  | 30  |
| Endrin ketone        | 53494-70-8 | 3.3 | 0.36 | ug/kg | 64-135                           | 23  | 64-135 | 23  |
| Endosulfan-I         | 959-98-8   | 1.7 | 0.33 | ug/kg | 68-119                           | 20  | 68-119 | 20  |
| Endosulfan-II        | 33213-65-8 | 1.7 | 0.33 | ug/kg | 65-124                           | 19  | 65-124 | 19  |
| Heptachlor           | 76-44-8    | 1.7 | 0.4  | ug/kg | 65-123                           | 26  | 65-123 | 26  |
| Heptachlor epoxide   | 1024-57-3  | 1.7 | 0.33 | ug/kg | 69-117                           | 26  | 69-117 | 26  |
| Methoxychlor         | 72-43-5    | 3.3 | 0.66 | ug/kg | 66-139                           | 23  | 66-139 | 23  |
| Toxaphene            | 8001-35-2  | 83  | 33   | ug/kg | 50-150                           | 30  | 50-150 | 30  |
| Tetrachloro-m-xylene |            |     |      |       | Surrogate Limits: 46-122         |     |        |     |
| Decachlorobiphenyl   |            |     |      |       | Surrogate Limits: 50-133         |     |        |     |

21 compounds and 2 surrogates reported in list PTCL

Compound List Report  
Product: P8081PESTTCL Pesticides, TCL  
Matrix: AQ Aqueous

Method List: P8081 AQ  
Report List: PTCL ALL  
RL/MDL Factor: 0.01

Method Ref: SW846 8081B  
Pesticide TCL List

LF17679  
LJ1046

| Compound             | CAS No.    | RL   | MDL        | Units | Control Limits (%) Rev: 01/16/07 |     |           | DUP |
|----------------------|------------|------|------------|-------|----------------------------------|-----|-----------|-----|
|                      |            |      |            |       | MS/MSD                           | RPD | BS        |     |
| Aldrin               | 309-00-2   | 0.05 | 0.005 ug/l |       | 72-122                           |     | 16 72-122 | 16  |
| alpha-BHC            | 319-84-6   | 0.05 | 0.005 ug/l |       | 77-132                           |     | 16 77-132 | 16  |
| beta-BHC             | 319-85-7   | 0.05 | 0.005 ug/l |       | 73-132                           |     | 17 73-132 | 17  |
| delta-BHC            | 319-86-8   | 0.05 | 0.005 ug/l |       | 43-127                           |     | 30 43-127 | 30  |
| gamma-BHC (Lindane)  | 58-89-9    | 0.05 | 0.005 ug/l |       | 80-136                           |     | 17 80-136 | 17  |
| alpha-Chlordane      | 5103-71-9  | 0.05 | 0.005 ug/l |       | 75-131                           |     | 16 75-131 | 16  |
| gamma-Chlordane      | 5103-74-2  | 0.05 | 0.005 ug/l |       | 79-136                           |     | 17 79-136 | 17  |
| Dieldrin             | 60-57-1    | 0.05 | 0.005 ug/l |       | 80-136                           |     | 16 80-136 | 16  |
| 4,4'-DDD             | 72-54-8    | 0.1  | 0.01 ug/l  |       | 64-154                           |     | 25 64-154 | 25  |
| 4,4'-DDE             | 72-55-9    | 0.1  | 0.01 ug/l  |       | 65-146                           |     | 21 65-146 | 21  |
| 4,4'-DDT             | 50-29-3    | 0.1  | 0.01 ug/l  |       | 62-143                           |     | 28 62-143 | 28  |
| Endrin               | 72-20-8    | 0.1  | 0.01 ug/l  |       | 75-139                           |     | 15 75-139 | 15  |
| Endosulfan sulfate   | 1031-07-8  | 0.1  | 0.01 ug/l  |       | 62-138                           |     | 24 62-138 | 24  |
| Endrin aldehyde      | 7421-93-4  | 0.1  | 0.01 ug/l  |       | 5-139                            |     | 44 5-139  | 44  |
| Endrin ketone        | 53494-70-8 | 0.1  | 0.01 ug/l  |       | 76-132                           |     | 17 76-132 | 17  |
| Endosulfan-I         | 959-98-8   | 0.05 | 0.005 ug/l |       | 72-140                           |     | 19 72-140 | 19  |
| Endosulfan-II        | 33213-65-8 | 0.05 | 0.005 ug/l |       | 75-139                           |     | 16 75-139 | 16  |
| Heptachlor           | 76-44-8    | 0.05 | 0.005 ug/l |       | 71-143                           |     | 15 71-143 | 15  |
| Heptachlor epoxide   | 1024-57-3  | 0.05 | 0.005 ug/l |       | 78-129                           |     | 17 78-129 | 17  |
| Methoxychlor         | 72-43-5    | 0.1  | 0.02 ug/l  |       | 63-140                           |     | 20 63-140 | 20  |
| Toxaphene            | 8001-35-2  | 2.5  | 1 ug/l     |       | 50-150                           |     | 20 50-150 | 20  |
| Tetrachloro-m-xylene | 877-09-8   |      |            |       | Surrogate Limits: 42-127         |     |           |     |
| Decachlorobiphenyl   | 2051-24-3  |      |            |       | Surrogate Limits: 27-127         |     |           |     |

21 compounds and 2 surrogates reported in list PTCL

Compound List Report  
Product: P8082PCB Polychlorinated Biphenyls  
Matrix: SO Solid

Method List: P8082 SO  
Report List: PCB ALL  
RL/MDL Factor: 0.33

Method Ref: SW846 8082A  
PCB List

LF16973  
LF2924

| Compound     | CAS No.    | RL | MDL       | Units | Control Limits (%) Rev: 04/25/07 |     |           |     |
|--------------|------------|----|-----------|-------|----------------------------------|-----|-----------|-----|
|              |            |    |           |       | MS/MSD                           | RPD | BS        | DUP |
| Aroclor 1016 | 12674-11-2 | 17 | 6.6 ug/kg |       | 69-117                           |     | 26 69-117 | 26  |
| Aroclor 1221 | 11104-28-2 | 17 | 8.3 ug/kg |       | 60-140                           |     | 30 60-140 | 30  |
| Aroclor 1232 | 11141-16-5 | 17 | 8.3 ug/kg |       | 70-130                           |     | 30 70-130 | 30  |
| Aroclor 1242 | 53469-21-9 | 17 | 6.6 ug/kg |       | 70-130                           |     | 30 70-130 | 30  |
| Aroclor 1248 | 12672-29-6 | 17 | 6.6 ug/kg |       | 70-130                           |     | 30 70-130 | 30  |
| Aroclor 1254 | 11097-69-1 | 17 | 6.6 ug/kg |       | 70-130                           |     | 30 70-130 | 30  |
| Aroclor 1260 | 11096-82-5 | 17 | 6.6 ug/kg |       | 71-121                           |     | 30 71-121 | 30  |

Tetrachloro-m- 877-09-8  
Decachlorobip 2051-24-3

Surrogate Limits: 44-126  
Surrogate Limits: 39-157

7 compounds and 2 surrogates reported in list PCB

Compound List Report

Product: P8082PCB Polychlorinated Biphenyls

Matrix: AQ Aqueous

Method List: P8082 AQ

Method Ref: SW846 8082A

LF16970

Report List: PCB ALL

PCB List

LF2924

RL/MDL Factor: 0.01

| Compound     | CAS No.    | RL  | MDL       | Units | Control Limits (%) Rev: 04/25/07 |     | BS        | DUP |
|--------------|------------|-----|-----------|-------|----------------------------------|-----|-----------|-----|
|              |            |     |           |       | MS/MSD                           | RPD |           |     |
| Aroclor 1016 | 12674-11-2 | 0.5 | 0.2 ug/l  |       | 76-117                           |     | 16 76-117 | 16  |
| Aroclor 1221 | 11104-28-2 | 0.5 | 0.25 ug/l |       | 60-140                           |     | 30 60-140 | 30  |
| Aroclor 1232 | 11141-16-5 | 0.5 | 0.25 ug/l |       | 70-130                           |     | 30 70-130 | 30  |
| Aroclor 1242 | 53469-21-9 | 0.5 | 0.2 ug/l  |       | 70-130                           |     | 30 70-130 | 30  |
| Aroclor 1248 | 12672-29-6 | 0.5 | 0.2 ug/l  |       | 70-130                           |     | 30 70-130 | 30  |
| Aroclor 1254 | 11097-69-1 | 0.5 | 0.2 ug/l  |       | 70-130                           |     | 30 70-130 | 30  |
| Aroclor 1260 | 11096-82-5 | 0.5 | 0.2 ug/l  |       | 65-117                           |     | 23 65-117 | 23  |

Tetrachloro-m-xyl 877-09-8

Surrogate Limits: 38-127

Decachlorobiphenyl 2051-24-3

Surrogate Limits: 25-137

7 compounds and 2 surrogates reported in list PCB



| Parm_Syn            | Units | 6010 AQ |      |       | Units | 6010 SO |      |       |
|---------------------|-------|---------|------|-------|-------|---------|------|-------|
|                     |       | DL      | LOD  | LOQ   |       | DL      | LOD  | LOQ   |
| Aluminum            | ug/l  | 25      | 25   | 200   | mg/kg | 1.2     | 1.25 | 10    |
| Antimony            | ug/l  | 2       | 2    | 6     | mg/kg | 0.1     | 0.1  | 1     |
| Arsenic             | ug/l  | 2       | 2    | 10    | mg/kg | 0.1     | 0.1  | 0.5   |
| Barium              | ug/l  | 5       | 5    | 200   | mg/kg | 0.5     | 0.5  | 10    |
| Beryllium           | ug/l  | 1       | 1    | 4     | mg/kg | 0.05    | 0.05 | 0.25  |
| Cadmium             | ug/l  | 1       | 1    | 5     | mg/kg | 0.05    | 0.05 | 0.2   |
| Calcium             | ug/l  | 100     | 100  | 1000  | mg/kg | 5       | 5    | 250   |
| Chromium            | ug/l  | 1       | 1    | 10    | mg/kg | 0.05    | 0.05 | 0.5   |
| Cobalt              | ug/l  | 1       | 1    | 50    | mg/kg | 0.05    | 0.05 | 2.5   |
| Copper              | ug/l  | 2       | 2    | 25    | mg/kg | 0.1     | 0.1  | 1.25  |
| Iron                | ug/l  | 35      | 50   | 300   | mg/kg | 1.7     | 2.5  | 15    |
| Lead                | ug/l  | 1       | 1    | 5     | mg/kg | 0.05    | 0.05 | 1     |
| Magnesium           | ug/l  | 100     | 100  | 5000  | mg/kg | 5       | 5    | 250   |
| Manganese           | ug/l  | 1       | 1    | 15    | mg/kg | 0.05    | 0.05 | 0.75  |
| Molybdenum          | ug/l  | 2       | 2    | 50    | mg/kg | 0.05    | 0.05 | 2.5   |
| Nickel              | ug/l  | 2       | 2    | 40    | mg/kg | 0.05    | 0.05 | 2     |
| Potassium           | ug/l  | 500     | 500  | 10000 | mg/kg | 25      | 25   | 500   |
| Selenium            | ug/l  | 2       | 2    | 10    | mg/kg | 0.2     | 0.2  | 1     |
| Silver              | ug/l  | 1       | 1    | 10    | mg/kg | 0.05    | 0.05 | 0.5   |
| Sodium              | ug/l  | 1900    | 2000 | 10000 | mg/kg | 55      | 100  | 500   |
| Strontium           | ug/l  | 1       | 1    | 10    | mg/kg | 0.05    | 0.05 | 0.5   |
| Thallium            | ug/l  | 1.85    | 2    | 10    | mg/kg | 0.13    | 0.25 | 0.5   |
| Tin                 | ug/l  | 1       | 1    | 50    | mg/kg | 0.05    | 0.05 | 2.5   |
| Titanium            | ug/l  | 2       | 2    | 10    | mg/kg | 0.1     | 0.1  | 0.5   |
| Vanadium            | ug/l  | 1       | 1    | 50    | mg/kg | 0.05    | 0.05 | 2.5   |
| Zinc                | ug/l  | 5       | 5    | 20    | mg/kg | 0.25    | 0.25 | 1     |
| Mercury (7470/7471) | ug/l  | 0.071   |      | 1     | ug/kg | 0.0103  |      | 0.083 |

Compound List Report  
Product: H8151FL Herbicides, Full List  
Matrix: AQ Aqueous

Method List: H8151 AQ  
Report List: HERBFL ALL  
RL/MDL Factor: 0.01

Method Ref: SW846 8151A  
Herbicide List

LF1768  
LF1448

| Compound          | CAS No.    | RL  | MDL        | Units | Control Limits (%) |     | Rev: 12/18/07 | BS        | DUP |
|-------------------|------------|-----|------------|-------|--------------------|-----|---------------|-----------|-----|
|                   |            |     |            |       | MS/MSD             | RPD |               |           |     |
| 2,4-D             | 94-75-7    | 1   | 0.25 ug/l  |       | 40-140             |     |               | 30 40-140 | 30  |
| 2,4,5-TP (Silvex) | 93-72-1    | 0.1 | 0.036 ug/l |       | 40-140             |     |               | 30 40-140 | 30  |
| 2,4,5-T           | 93-76-5    | 0.1 | 0.019 ug/l |       | 40-140             |     |               | 30 40-140 | 30  |
| Dicamba           | 1918-00-9  | 0.1 | 0.025 ug/l |       | 40-140             |     |               | 30 40-140 | 30  |
| Dinoseb           | 88-85-7    | 2   | 0.5 ug/l   |       | 10-140             |     |               | 30 10-140 | 30  |
| Dalapon           | 75-99-0    | 2.5 | 1 ug/l     |       | 20-140             |     |               | 30 20-140 | 30  |
| Dichloroprop      | 120-36-5   | 1   | 0.21 ug/l  |       | 40-140             |     |               | 30 40-140 | 30  |
| 2,4-DB            | 94-82-6    | 1   | 0.44 ug/l  |       | 40-140             |     |               | 30 40-140 | 30  |
| MCPP              | 93-65-2    | 100 | 13 ug/l    |       | 40-140             |     |               | 30 40-140 | 30  |
| MCPA              | 94-74-6    | 100 | 19 ug/l    |       | 40-140             |     |               | 30 40-140 | 30  |
| Pentachlorophenol | 87-86-5    | 0.1 | 0.021 ug/l |       | 40-140             |     |               | 30 40-140 | 30  |
| 2,4-DCAA          | 19719-28-9 |     |            |       | Surrogate Limits:  |     |               | 40-140    |     |

11 compounds and 1 surrogates reported in list HERBFL

Compound List Report  
Product: H8151FL Herbicides, Full List  
Matrix: SO Solid

Method List: H8151 SO  
Report List: HERBFL ALL  
RL/MDL Factor: 0.33

Method Ref: SW846 8151A  
Herbicide List

LF17529  
LF1449

| Compound          | CAS No.   | RL   | MDL  | Units | Control Limits (%) Rev: 12/18/07 |     |           | DUP |
|-------------------|-----------|------|------|-------|----------------------------------|-----|-----------|-----|
|                   |           |      |      |       | MS/MSD                           | RPD | BS        |     |
| 2,4-D             | 94-75-7   | 33   | 10   | ug/kg | 40-140                           |     | 30 40-140 | 30  |
| 2,4,5-TP (Silvex) | 93-72-1   | 3.3  | 1.1  | ug/kg | 40-140                           |     | 30 40-140 | 30  |
| 2,4,5-T           | 93-76-5   | 3.3  | 1.1  | ug/kg | 40-140                           |     | 30 40-140 | 30  |
| Dicamba           | 1918-00-9 | 3.3  | 1.4  | ug/kg | 40-140                           |     | 30 40-140 | 30  |
| Dinoseb           | 88-85-7   | 83   | 17   | ug/kg | 10-140                           |     | 30 10-140 | 30  |
| Dalapon           | 75-99-0   | 170  | 33   | ug/kg | 20-140                           |     | 30 20-140 | 30  |
| Dichloroprop      | 120-36-5  | 33   | 12   | ug/kg | 40-140                           |     | 30 40-140 | 30  |
| 2,4-DB            | 94-82-6   | 33   | 10   | ug/kg | 40-140                           |     | 30 40-140 | 30  |
| MCPP              | 93-65-2   | 3300 | 720  | ug/kg | 40-140                           |     | 30 40-140 | 30  |
| MCPA              | 94-74-6   | 3300 | 1000 | ug/kg | 40-140                           |     | 30 40-140 | 30  |
| Pentachlorophenol | 87-86-5   | 3.3  | 0.78 | ug/kg | 40-140                           |     | 30 40-140 | 30  |

|          |            |  |  |  |                   |        |
|----------|------------|--|--|--|-------------------|--------|
| 2,4-DCAA | 19719-28-9 |  |  |  | Surrogate Limits: | 40-140 |
|----------|------------|--|--|--|-------------------|--------|

11 compounds and 1 surrogates reported in list HERBFL

## Compound List Report

Product: V8260STD Volatile Organics

Matrix: AQ Aqueous

Nov 22, 2010 03:09 prr

Method List: VAIX826C Method Ref: SW846 8260B

LF17742

The 8260 Sim method will be used 1,4 Dioxane

Report List: V8260 ALL VOA 8260 List

LF3395

RL/MDL Factor: 1

| Compound CAS No.        | RL | MDL | Units     | Control Limits (%) Rev: 10/23/10 |     | BS        | DUP |
|-------------------------|----|-----|-----------|----------------------------------|-----|-----------|-----|
|                         |    |     |           | MS/MSD                           | RPD |           |     |
| Acetone 67-64-1         |    | 25  | 10 ug/l   | 59-134                           |     | 14 59-134 | 14  |
| Acrolein 107-02-8       |    | 20  | 5 ug/l    | 33-157                           |     | 21 33-157 | 21  |
| Acrylonitril 107-13-1   |    | 10  | 3 ug/l    | 62-124                           |     | 13 62-124 | 13  |
| Benzene 71-43-2         |    | 1   | 0.2 ug/l  | 83-124                           |     | 11 83-124 | 11  |
| Bromoben; 108-86-1      |    | 1   | 0.25 ug/l | 83-115                           |     | 10 83-115 | 10  |
| Bromochlo 74-97-5       |    | 1   | 0.22 ug/l | 78-112                           |     | 10 78-112 | 10  |
| Bromodich 75-27-4       |    | 1   | 0.2 ug/l  | 76-116                           |     | 10 76-116 | 10  |
| Bromoform 75-25-2       |    | 1   | 0.2 ug/l  | 68-128                           |     | 11 68-128 | 11  |
| n-Butylben 104-51-8     |    | 1   | 0.26 ug/l | 84-124                           |     | 10 84-124 | 10  |
| sec-Butylb; 135-98-8    |    | 1   | 0.22 ug/l | 86-127                           |     | 10 86-127 | 10  |
| tert-Butylb 98-06-6     |    | 1   | 0.27 ug/l | 83-126                           |     | 10 83-126 | 10  |
| Chloroben; 108-90-7     |    | 1   | 0.2 ug/l  | 87-115                           |     | 9 87-115  | 9   |
| Chloroetha 75-00-3      |    | 2   | 0.5 ug/l  | 54-166                           |     | 20 54-166 | 20  |
| Chloroform 67-66-3      |    | 1   | 0.22 ug/l | 85-123                           |     | 10 85-123 | 10  |
| o-Chloroto 95-49-8      |    | 1   | 0.22 ug/l | 84-121                           |     | 10 84-121 | 10  |
| p-Chloroto 106-43-4     |    | 1   | 0.2 ug/l  | 84-120                           |     | 10 84-120 | 10  |
| 2-Chloroet; 110-75-8    |    | 5   | 1.2 ug/l  | 63-125                           |     | 24 63-125 | 24  |
| Carbon dis; 75-15-0     |    | 2   | 0.5 ug/l  | 67-147                           |     | 12 67-147 | 12  |
| Carbon tet; 56-23-5     |    | 1   | 0.25 ug/l | 74-139                           |     | 13 74-139 | 13  |
| 1,1-Dichlor 75-34-3     |    | 1   | 0.25 ug/l | 82-127                           |     | 10 82-127 | 10  |
| 1,1-Dichlor 75-35-4     |    | 1   | 0.23 ug/l | 75-133                           |     | 13 75-133 | 13  |
| 1,1-Dichlor 563-58-6    |    | 1   | 0.28 ug/l | 87-127                           |     | 10 87-127 | 10  |
| 1,2-Dibrom 96-12-8      |    | 2   | 0.5 ug/l  | 61-118                           |     | 15 61-118 | 15  |
| 1,2-Dibrom 106-93-4     |    | 1   | 0.37 ug/l | 80-115                           |     | 10 80-115 | 10  |
| 1,2-Dichlor 107-06-2    |    | 1   | 0.2 ug/l  | 76-122                           |     | 11 76-122 | 11  |
| 1,2-Dichlor 78-87-5     |    | 1   | 0.25 ug/l | 81-120                           |     | 11 81-120 | 11  |
| 1,3-Dichlor 142-28-9    |    | 1   | 0.2 ug/l  | 81-113                           |     | 11 81-113 | 11  |
| 2,2-Dichlor 594-20-7    |    | 1   | 0.44 ug/l | 77-138                           |     | 12 77-138 | 12  |
| Dibromoch 124-48-1      |    | 1   | 0.2 ug/l  | 74-116                           |     | 11 74-116 | 11  |
| Dichlorodif 75-71-8     |    | 2   | 0.5 ug/l  | 34-158                           |     | 22 34-158 | 22  |
| cis-1,2-Dicl 156-59-2   |    | 1   | 0.26 ug/l | 81-114                           |     | 10 81-114 | 10  |
| cis-1,3-Dicl 10061-01-5 |    | 1   | 0.2 ug/l  | 83-119                           |     | 10 83-119 | 10  |
| m-Dichloro 541-73-1     |    | 1   | 0.2 ug/l  | 86-115                           |     | 9 86-115  | 9   |
| o-Dichlorol 95-50-1     |    | 1   | 0.25 ug/l | 85-115                           |     | 9 85-115  | 9   |
| p-Dichlorol 106-46-7    |    | 1   | 0.23 ug/l | 87-113                           |     | 10 87-113 | 10  |

|                                    |    |           |        |           |    |
|------------------------------------|----|-----------|--------|-----------|----|
| trans-1,2-D 156-60-5               | 1  | 0.35 ug/l | 82-126 | 10 82-126 | 10 |
| trans-1,3-D 10061-02-6             | 1  | 0.2 ug/l  | 87-123 | 10 87-123 | 10 |
| Ethylbenzene 100-41-4              | 1  | 0.2 ug/l  | 87-118 | 10 87-118 | 10 |
| 2-Hexanone 591-78-6                | 10 | 4 ug/l    | 58-125 | 14 58-125 | 14 |
| Hexachlorocyclopentadiene 87-68-3  | 2  | 0.8 ug/l  | 71-133 | 12 71-133 | 12 |
| Isopropylbenzene 98-82-8           | 1  | 0.2 ug/l  | 87-131 | 10 87-131 | 10 |
| p-Isopropylbenzene 99-87-6         | 1  | 0.21 ug/l | 83-125 | 9 83-125  | 9  |
| 4-Methyl-2-pentanone 108-10-1      | 5  | 2 ug/l    | 62-125 | 13 62-125 | 13 |
| Methyl bromide 74-83-9             | 2  | 0.5 ug/l  | 55-151 | 21 55-151 | 21 |
| Methyl chloride 74-87-3            | 2  | 0.5 ug/l  | 55-173 | 22 55-173 | 22 |
| Methylene chloride 74-95-3         | 2  | 0.25 ug/l | 81-116 | 10 81-116 | 10 |
| Methylene sulfide 75-09-2          | 5  | 2 ug/l    | 69-125 | 11 69-125 | 11 |
| Methyl ethyl ketone 78-93-3        | 5  | 2 ug/l    | 61-127 | 13 61-127 | 13 |
| Methyl tert-butyl ether 1634-04-4  | 1  | 0.34 ug/l | 75-116 | 10 75-116 | 10 |
| Naphthalene 91-20-3                | 5  | 1 ug/l    | 59-125 | 15 59-125 | 15 |
| n-Propylbenzene 103-65-1           | 1  | 0.2 ug/l  | 86-125 | 10 86-125 | 10 |
| Styrene 100-42-5                   | 1  | 0.2 ug/l  | 78-118 | 11 78-118 | 11 |
| 1,1,1,2-Tetrachloroethane 630-20-6 | 1  | 0.2 ug/l  | 81-119 | 10 81-119 | 10 |
| 1,1,1-Trichloroethane 71-55-6      | 1  | 0.2 ug/l  | 79-133 | 11 79-133 | 11 |
| 1,1,2,2-Tetrachloroethane 79-34-5  | 1  | 0.23 ug/l | 71-120 | 11 71-120 | 11 |
| 1,1,2-Trichloroethane 79-00-5      | 1  | 0.22 ug/l | 80-114 | 11 80-114 | 11 |
| 1,2,3-Trichloroethane 87-61-6      | 1  | 0.5 ug/l  | 64-126 | 16 64-126 | 16 |
| 1,2,3-Trichloroethane 96-18-4      | 2  | 0.3 ug/l  | 77-115 | 12 77-115 | 12 |
| 1,2,4-Trichlorobenzene 120-82-1    | 1  | 0.5 ug/l  | 68-123 | 11 68-123 | 11 |
| 1,2,4-Trimethylbenzene 95-63-6     | 2  | 0.27 ug/l | 82-120 | 10 82-120 | 10 |
| 1,3,5-Trimethylbenzene 108-67-8    | 2  | 0.21 ug/l | 83-123 | 10 83-123 | 10 |
| Tetrachloroethene 127-18-4         | 1  | 0.25 ug/l | 80-131 | 12 80-131 | 12 |
| Toluene 108-88-3                   | 1  | 0.2 ug/l  | 86-116 | 10 86-116 | 10 |
| Trichloroethene 79-01-6            | 1  | 0.26 ug/l | 85-124 | 10 85-124 | 10 |
| Trichlorofluoromethane 75-69-4     | 2  | 0.5 ug/l  | 66-156 | 15 66-156 | 15 |
| Vinyl chloride 75-01-4             | 1  | 0.22 ug/l | 57-153 | 22 57-153 | 22 |
| Vinyl Acetate 108-05-4             | 10 | 2 ug/l    | 38-159 | 11 38-159 | 11 |
| m,p-Xylene                         | 2  | 0.32 ug/l | 86-121 | 10 86-121 | 10 |
| o-Xylene 95-47-6                   | 1  | 0.2 ug/l  | 83-121 | 10 83-121 | 10 |
| 1,4 dioxane                        | 2  | 1 ug/kg   | 82-126 | 25 82-126 | 10 |

Dibromofluoromethane 1868-53-7  
1,2-Dichloroethane 17060-07-0  
Toluene-D8 2037-26-5  
4-Bromofluorobenzene 460-00-4

Surrogate Limits: 87-116  
Surrogate Limits: 76-127  
Surrogate Limits: 86-112  
Surrogate Limits: 84-120

69 compounds and 4 surrogates reported in list V8260

Compound List Report  
Product: V8260STD Volatile Organics

Matrix: SO Solid

Nov 22, 2010 03:09 pm

Method List: VAIX8260 SO Method Ref: SW846 8260B LF17743

The 8260 Sim method will be used 1,4 Dioxane

Report List: V8260 ALL VOA 8260 List LF3395

RL/MDL Factor: 1

| Compound                    | CAS No.    | RL | MDL       | Units  | Control Limits (%) Rev: 10/23/10 |        |    |     |
|-----------------------------|------------|----|-----------|--------|----------------------------------|--------|----|-----|
|                             |            |    |           |        | MS/MSD                           | RPD    | BS | DUP |
| Acetone                     | 67-64-1    | 50 | 20 ug/kg  | 61-144 | 29                               | 61-144 |    |     |
| Acrolein                    | 107-02-8   | 25 | 11 ug/kg  | 27-156 | 39                               | 27-156 |    |     |
| Acrylonitrile               | 107-13-1   | 25 | 11 ug/kg  | 55-144 | 24                               | 55-144 |    |     |
| Benzene                     | 71-43-2    | 5  | 1.5 ug/kg | 78-130 | 25                               | 78-130 |    |     |
| Bromobenzene                | 108-86-1   | 5  | 1.4 ug/kg | 78-123 | 30                               | 78-123 |    |     |
| Bromochloromethane          | 74-97-5    | 5  | 1.4 ug/kg | 72-122 | 23                               | 72-122 |    |     |
| Bromodichloromethane        | 75-27-4    | 5  | 1.1 ug/kg | 73-122 | 25                               | 73-122 |    |     |
| Bromoform                   | 75-25-2    | 5  | 1.5 ug/kg | 70-139 | 26                               | 70-139 |    |     |
| n-Butylbenzene              | 104-51-8   | 5  | 1.3 ug/kg | 80-138 | 31                               | 80-138 |    |     |
| sec-Butylbenzene            | 135-98-8   | 5  | 1.6 ug/kg | 82-132 | 29                               | 82-132 |    |     |
| tert-Butylbenzene           | 98-06-6    | 5  | 1.2 ug/kg | 79-130 | 29                               | 79-130 |    |     |
| Chlorobenzene               | 108-90-7   | 5  | 1 ug/kg   | 83-122 | 23                               | 83-122 |    |     |
| Chloroethane                | 75-00-3    | 5  | 2 ug/kg   | 61-153 | 31                               | 61-153 |    |     |
| Chloroform                  | 67-66-3    | 5  | 1.2 ug/kg | 79-129 | 27                               | 79-129 |    |     |
| o-Chlorotoluene             | 95-49-8    | 5  | 1.2 ug/kg | 77-123 | 31                               | 77-123 |    |     |
| p-Chlorotoluene             | 106-43-4   | 5  | 1.2 ug/kg | 78-129 | 29                               | 78-129 |    |     |
| 2-Chloroethyl vinyl ether   | 110-75-8   | 25 | 10 ug/kg  | 52-142 | 25                               | 52-142 |    |     |
| Carbon disulfide            | 75-15-0    | 5  | 2 ug/kg   | 61-142 | 27                               | 61-142 |    |     |
| Carbon tetrachloride        | 56-23-5    | 5  | 1.8 ug/kg | 79-135 | 29                               | 79-135 |    |     |
| 1,1-Dichloroethane          | 75-34-3    | 5  | 1.1 ug/kg | 77-132 | 26                               | 77-132 |    |     |
| 1,1-Dichloroethylene        | 75-35-4    | 5  | 1.4 ug/kg | 66-132 | 27                               | 66-132 |    |     |
| 1,1-Dichloropropene         | 563-58-6   | 5  | 1.3 ug/kg | 81-133 | 26                               | 81-133 |    |     |
| 1,2-Dibromo-3-chloropropane | 96-12-8    | 5  | 2.3 ug/kg | 67-129 | 29                               | 67-129 |    |     |
| 1,2-Dibromoethane           | 106-93-4   | 5  | 1 ug/kg   | 77-126 | 24                               | 77-126 |    |     |
| 1,2-Dichloroethane          | 107-06-2   | 5  | 1 ug/kg   | 78-129 | 24                               | 78-129 |    |     |
| 1,2-Dichloropropane         | 78-87-5    | 5  | 1.2 ug/kg | 74-127 | 27                               | 74-127 |    |     |
| 1,3-Dichloropropane         | 142-28-9   | 5  | 1 ug/kg   | 78-118 | 26                               | 78-118 |    |     |
| 2,2-Dichloropropane         | 594-20-7   | 5  | 1.4 ug/kg | 80-137 | 28                               | 80-137 |    |     |
| Dibromochloromethane        | 124-48-1   | 5  | 1 ug/kg   | 78-117 | 27                               | 78-117 |    |     |
| Dichlorodifluoromethane     | 75-71-8    | 5  | 1.5 ug/kg | 35-162 | 30                               | 35-162 |    |     |
| cis-1,2-Dichloroethylene    | 156-59-2   | 5  | 1.5 ug/kg | 74-123 | 26                               | 74-123 |    |     |
| cis-1,3-Dichloropropene     | 10061-01-5 | 5  | 1 ug/kg   | 79-130 | 23                               | 79-130 |    |     |
| m-Dichlorobenzene           | 541-73-1   | 5  | 1.2 ug/kg | 82-126 | 29                               | 82-126 |    |     |

|                          |            |    |           |        |           |
|--------------------------|------------|----|-----------|--------|-----------|
| o-Dichlorobenzene        | 95-50-1    | 5  | 1.1 ug/kg | 83-123 | 28 83-123 |
| p-Dichlorobenzene        | 106-46-7   | 5  | 1.1 ug/kg | 84-124 | 28 84-124 |
| trans-1,2-Dichloroethyle | 156-60-5   | 5  | 1.5 ug/kg | 77-129 | 27 77-129 |
| trans-1,3-Dichloroprope  | 10061-02-6 | 5  | 1.1 ug/kg | 87-131 | 27 87-131 |
| Ethylbenzene             | 100-41-4   | 5  | 1 ug/kg   | 82-124 | 25 82-124 |
| 2-Hexanone               | 591-78-6   | 25 | 5.4 ug/kg | 67-130 | 29 67-130 |
| Hexachlorobutadiene      | 87-68-3    | 5  | 2 ug/kg   | 77-150 | 36 77-150 |
| Isopropylbenzene         | 98-82-8    | 5  | 1.1 ug/kg | 82-133 | 27 82-133 |
| p-Isopropyltoluene       | 99-87-6    | 5  | 1.2 ug/kg | 82-132 | 29 82-132 |
| 4-Methyl-2-pentanone     | 108-10-1   | 25 | 5.5 ug/kg | 69-125 | 24 69-125 |
| Methyl bromide           | 74-83-9    | 5  | 2 ug/kg   | 60-146 | 31 60-146 |
| Methyl chloride          | 74-87-3    | 5  | 2 ug/kg   | 58-163 | 26 58-163 |
| Methylene bromide        | 74-95-3    | 5  | 1.5 ug/kg | 75-128 | 26 75-128 |
| Methylene chloride       | 75-09-2    | 10 | 4.6 ug/kg | 62-140 | 25 62-140 |
| Methyl ethyl ketone      | 78-93-3    | 25 | 6.1 ug/kg | 66-134 | 23 66-134 |
| Methyl Tert Butyl Ether  | 1634-04-4  | 5  | 2 ug/kg   | 70-131 | 25 70-131 |
| Naphthalene              | 91-20-3    | 5  | 2 ug/kg   | 59-143 | 31 59-143 |
| n-Propylbenzene          | 103-65-1   | 5  | 1.4 ug/kg | 78-129 | 29 78-129 |
| Styrene                  | 100-42-5   | 5  | 2.6 ug/kg | 79-123 | 28 79-123 |
| 1,1,1,2-Tetrachloroetha  | 630-20-6   | 5  | 1 ug/kg   | 81-121 | 25 81-121 |
| 1,1,1-Trichloroethane    | 71-55-6    | 5  | 1.1 ug/kg | 80-133 | 27 80-133 |
| 1,1,2,2-Tetrachloroetha  | 79-34-5    | 5  | 1.2 ug/kg | 70-128 | 30 70-128 |
| 1,1,2-Trichloroethane    | 79-00-5    | 5  | 1.1 ug/kg | 76-118 | 28 76-118 |
| 1,2,3-Trichlorobenzene   | 87-61-6    | 5  | 1 ug/kg   | 78-136 | 34 78-136 |
| 1,2,3-Trichloropropane   | 96-18-4    | 5  | 1.7 ug/kg | 74-125 | 30 74-125 |
| 1,2,4-Trichlorobenzene   | 120-82-1   | 5  | 1.2 ug/kg | 82-137 | 32 82-137 |
| 1,2,4-Trimethylbenzene   | 95-63-6    | 5  | 1.1 ug/kg | 77-129 | 29 77-129 |
| 1,3,5-Trimethylbenzene   | 108-67-8   | 5  | 1.3 ug/kg | 79-129 | 31 79-129 |
| Tetrachloroethylene      | 127-18-4   | 5  | 1 ug/kg   | 79-132 | 27 79-132 |
| Toluene                  | 108-88-3   | 5  | 1.2 ug/kg | 80-123 | 26 80-123 |
| Trichloroethylene        | 79-01-6    | 5  | 1.2 ug/kg | 78-132 | 28 78-132 |
| Trichlorofluoromethane   | 75-69-4    | 5  | 2 ug/kg   | 67-149 | 29 67-149 |
| Vinyl chloride           | 75-01-4    | 5  | 1.5 ug/kg | 60-145 | 29 60-145 |
| Vinyl Acetate            | 108-05-4   | 25 | 14 ug/kg  | 25-164 | 35 25-164 |
| m,p-Xylene               |            | 10 | 2.2 ug/kg | 82-128 | 25 82-128 |
| o-Xylene                 | 95-47-6    | 5  | 1 ug/kg   | 82-126 | 25 82-126 |
| 1,4 -Dioxane             |            | 2  | 1 ug/kg   | 82-126 | 25 82-126 |

Dibromofluoromethane 1868-53-7

Surrogate Limits: 80-121

Toluene-D8 2037-26-5

Surrogate Limits: 71-130

4-Bromofluorobenzene 460-00-4

Surrogate Limits: 59-148

1,2-Dichloroethane-D4 17060-07-0

Surrogate Limits: 77-123

69 compounds and 4 surrogates reported in list V8260

**Clean Harbors Kansas, LLC  
Section J  
Closure Plan  
Appendix J-A - Tables**

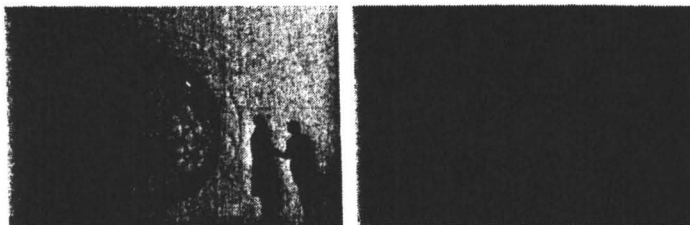
**Appendix J-B  
Example Engineer Resume**

**May 10, 2011  
Revision No. 14**



## David S. Wilson, P.E., P.G.

Principal



David Wilson is a Principal with ERM based in Salt Lake City, Utah. Mr. Wilson has more than twenty years of experience in environmental and geotechnical engineering. He is experienced in site remediation and waste management, including regulatory compliance audits, due diligence, environmental assessments and site investigations, conceptual and final engineering design, construction, and QA/QC services.

Mr. Wilson has performed feasibility studies, final designs and construction observation services for a variety of environmental remediation projects for waste sites having contaminated sludges, debris, soil, surface water and ground water. He has designed closure systems for hazardous and solid waste sites requiring stabilization, closure by capping, installation of slurry walls, placement of geosynthetic materials, removal of wastes, and ground water contaminant recovery systems.

Mr. Wilson has both U.S. and international experience, including two years in Brazil. He is fluent in English, Spanish and Portuguese. His project work has included RI/FS and RD/RA for CERCLA sites, RFI/CMS for RCRA facilities, and TSCA closures for PCB sites.

### Publications (Partial List)

- "Remediation and Redevelopment of Historical Metals Smelter Facility Midvale Slag Superfund Site - Operable Unit One Midvale," November 2007, V International Seminar on Remediation and Redevelopment of Contaminated Sites, Sao Paulo, Brazil.
- "USEPA Procedures for Establishing Environmental Screening and Cleanup Levels," April 2007, Panamerican Health Organization, Brasilia, Brazil.
- "Sediment Removal Action - Northwest Oil Drain Canal - Salt Lake City, Utah," January 2007, Battelle Sediment Conference, Savannah, Georgia.
- "Brownfield Redevelopment Solutions, Recovering a Communities Hidden Assets" Member of Envision Utah's consulting team for document development, 2006.

### Professional Affiliations & Registrations

- Professional Engineer, 1993
- Professional Geologist, 1993
- Air & Waste Management Association
- Association of Engineering Geologists
- Society of American Military Engineers
- Utah Manufacturers Association
- Utah Mining Association
- Utah Pollution Prevention Association Board
- Rocky Mountain Fabricare Association
- ERM Foundation Board

### Fields of Competence

- Geotechnical engineering
- Hydrogeology and groundwater monitoring
- Solid & Hazardous Waste Management
- Radioactive Waste Management
- Site Remediation
- Landfill siting and design
- RCRA/TSCA (PCB) Closures and Corrective Action
- Construction QA/QC engineering
- Geoenvironmental engineering
- Applications and geosynthetics design
- Regulatory compliance audits
- Environmental due diligence

### Education

- M.S., Civil/Geotechnical Engineering, Drexel University, 1993
- B.S., Geological Engineering, University of Utah, 1988
- Utah UST Consultant Registration (since 1996)
- OSHA 40-hour Certification

### Languages

- English, native speaker
- Spanish, fluent
- Portuguese, fluent

## Key Projects

Directed feasibility study for heavy equipment company to evaluate best technologies for remediation of PCB-contaminated soil. Current work includes preparation of a bench-scale test for ozone-pile chemical oxidation of more than 10,000 drums of affected soil.

Provided engineering and hydrogeological support to a Utah-based LLRW landfill seeking a permit modification to convert part of a NORM cell into a Class A waste cell. Work included responses and engineering revisions to address comments from Utah DRC.

Provided oversight engineering and permitting support to the Skull Valley Band of Goshute Indians on whose land a private company was developing and operating a MSW balefill and C&D waste cell.

Director of sampling and closure certification program for the Coffeyville, Kansas hazardous waste (RCRA/TSCA) incinerator. This work included coordination with the owner, contractor, state regulators and EPA, and laboratory, to document the completion of activities in accordance with the Closure Plan.

Directed and certified the Construction Quality Assurance (CQA) for Cell 14 Closure and Cell 15 Phase 1B Construction at the Lone Mountain Hazardous Waste Landfill in Oklahoma.

Directed decontamination Sampling and Certification of Closure for PCB storage and treatment facility in Kansas City, Missouri for warehouse and tank farm areas.

Provided certification engineering and construction management services during closure of the Clive (Utah) hazardous waste and TSCA (PCB) incinerator, which included development of 14 closure reports for the closed units.

Engineering certification for closure and post-closure cost estimates for three Utah TSD facilities, including: Grassy Mountain Landfill Facility, the Aragonite Incinerator, and remaining Clive waste management operations.

Managed the construction quality assurance services for closure of three landfill cells (industrial and TSCA cells) at the Grassy Mountain hazardous waste landfill facility in Utah. Services included oversight and documentation of all construction activities.

Directed a Needs Assessment for Tooele County, Utah to assess the viability of a second landfill in the county for receipt of low-level nuclear waste and naturally occurring radioactive material (NORM).

Provided consultation and closure oversight for historic PCB transformer areas at Wyoming mining operation under the TSCA self implementation closure program.

Designed and oversaw construction for closure of an industrial, hazardous waste landfill at a chemical plant in Brazil. The landfill closure included waste dewatering, grading, gas venting, clay and synthetic liners, storm water management, and ground water monitoring.

Managed, engineered and directed QA services during closure of various RCRA units, including two mercury sludge impoundments, a drum storage pad, and a carbon tetrachloride storage tank at a Delaware chemical facility.

Provided engineering design and construction phase QA services during installation of a 500-foot long by 20-foot deep ground water recovery trench at a Pennsylvania Superfund Site for recovery and treatment of contaminated ground water.

Developed a Remedial Design Plan and managed the QA services during construction of a remediation project for a New York manufacturing plant for removal of PCBs and volatile organics from surface soils, sediment and shallow ground water.

Provided conceptual and final engineering design, followed by CQA services, for a landfill gas mitigation system to control the release of methane at a former New Jersey landfill located near a shopping center.

Performed an engineering evaluation of a closed hazardous waste landfill at a site in Colorado to determine the cause for cap movement. This study included geotechnical analysis of soil and geosynthetic components in the cap and evaluation of potential slope failure mechanisms.

Engineered a closure design and provided QA consulting services for a hazardous waste disposal site at an Iowa manufacturing facility, which involved installation of slurry walls, a synthetic membrane and asphalt pavement cap, and a gas collection system.

**PROPOSAL**  
**EVANS ENVIRONMENTAL CONSTRUCTION**  
**13585 192<sup>ND</sup> STREET**  
**COUNCIL BLUFFS, IOWA 51503**  
**TELE: (712) 366-5834 FAX: (712) 366-5407**  
**E-MAIL: evansenv@mcleodusa.net**

**DATE:** September 7, 2001

**PROJECT:** AST Cleaning Services, 725 Service Center, Wichita, KS

**CLIENT:** Safety Kleen Corp. Rusty Dunn  
Ph 316 269-7400 Fx 316 269 7455 Rusty Dunn

**EEC ESTIMATOR:** Jeff Evans

**SCOPE OF WORK:**

Mobilize to site. Primary task will be the cleaning of Tanks V-9, 10, 11, 12, 13, 14, 15a, 15b, 15c, 15d and 16. All tanks shall be "cold-cut" as necessary to permit entry. EEC will assist Client with sampling if applicable. All rinseates and sludges will be placed in vessels/containers provided by Client. Client shall pay for all disposal and analytical. All work shall be performed in strict compliance with OSHA, NFPA, and API protocol including confined space procedures.  
Demobilize.

All EEC employees shall be 40 Hr-Certified for Hazardous Waste Operations per OSHA 1910.120

**COST OF WORK:**

|                                     |           |
|-------------------------------------|-----------|
| 1. Mobilization/demobilization      | 1,500.00  |
| 2. Total project as described above | 17,600.00 |

**SUBMITTED BY:**

**ACCEPTANCE:**

**SIGNATURE:**

**SIGNATURE:**

**TITLE:**

**TITLE:**

**DATE:**

**DATE:**

# Evans Environmental Construction

Phone (712)527-1440  
Fax (712) 527-1442  
58823 Railroad Avenue  
Glenwood, IA 51534

## Invoice

| Date       | Invoice # |
|------------|-----------|
| 11/15/2001 | 115996    |

|   |
|---|
| <b>Bill To</b>  |
| Safety-Kleen Corp.<br>2549 N. New York<br>Wichita, KS 67219<br>Attention:Rusty Dunn |

|   |
|---|
| <b>Job Reference</b>                                      |
| AST Cleaning Services, 725<br>Service Center, Wichita, KS |

| P.O. No. | Due Date   |
|----------|------------|
| 110029   | 11/15/2001 |

| Description   | Amount             |
|---|--------------------|
| 1. Mobe/Demobe  | 1,500.00           |
| 2. Cleaning services , as bid   | 17,600.00          |
| CHANGES IN SCOPE  |                    |
| A. Removed "more than double" quantity of sledge from tanks than specified  | 0.00               |
| NO CHARGE   |                    |
| <div style="border: 1px solid black; padding: 5px; margin: 5px;"> Date Rcvd: 11/20/01<br/> Vendor # 32653<br/> G/L Distrib 725 222.05655.206<br/> G/L Distrib 725 505.084<br/> G/L Distrib 725<br/> Total 19,100.00<br/> Accrued 11/20/01<br/> Int </div> |                    |
| <b>Total</b>  | <b>\$19,100.00</b> |

16 115443

**Clean Harbors Kansas, LLC  
RCRA Permit Application  
Section K  
Financial Requirements**

**Table of Contents**

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| <b>List of Acronyms.....</b>          | <b>i</b> |
| <b>K-1 Financial Assurance: .....</b> | <b>1</b> |
| <b>K-2 Insurance Coverage:.....</b>   | <b>2</b> |
| <b>K-3 Notice in Deed: .....</b>      | <b>3</b> |

**List of Appendices**

Appendix K-A, Financial Assurance Information  
Appendix K-B, Certificate of Insurance for Closure or Post Closure Care  
Appendix K-C, Hazardous Waste Certificate of Insurance  
Appendix K-D, Notice in Deed

**List of Acronyms**

Clean Harbors Kansas, LLC (CHK)  
Certificate of Insurance for Closure or Post Closure Care (CI)  
Treatment, Storage and Disposal (TSD)  
Kansas Administrative Regulations (KAR)

**July 11, 2008  
Revision No. 11**

**Clean Harbors Kansas, LLC**  
**RCRA Permit Application**  
**Section K**  
**Financial Requirements**

**K-1    Financial Assurance: 40 CFR 264.143**

Clean Harbors Kansas, LLC (CHK) has chosen to use a Certificate of Insurance for Closure or Post Closure Care (CI) to meet facility closure financial assurance requirements. The CI is currently issued by Steadfast Insurance Company of Schaumburg, Illinois.

Appendix K-A, Financial Assurance Information, summarizes facility information, funds assured for closure, and details regarding the CI. The CI is amended annually for inflation as required by 40 CFR 264.142(b) for hazardous waste Treatment, Storage, and Disposal (TSD) facilities operating under a Hazardous Waste Permit. The facility closure cost estimate and corresponding funding instrument will be adjusted on an annual basis for: 1) inflation; and 2) whenever facility changes affecting closure costs occur. A copy of the CI is presented in Appendix K-B, Certificate of Insurance for Closure or Post Closure Care.

One of the options specified in 40 CFR 264.143 paragraphs (a) through (f) must be established to provide financial assurance for closure of a TSD facility. CHK may convert the financial instrument described above to an alternate option specified by federal regulations.

**July 11, 2008**  
**Revision No. 11**

**Clean Harbors Kansas, LLC  
RCRA Permit Application  
Section K  
Financial Requirements**

**K-2    Insurance Coverage: 40 CFR 264.147**

CHK maintains insurance policies to cover general liability, automobile liability, workers compensation, employers' liability and environmental impairment liability (pollution legal liability). The environmental impairment liability includes both sudden and non-sudden pollution coverage. A copy of the Hazardous Waste Facility Certificate of Insurance for accidental occurrences is presented in Appendix K-C, Hazardous Waste Certificate of Insurance.

**July 11, 2008  
Revision No. 11**

**Clean Harbors Kansas, LLC  
RCRA Permit Application  
Section K  
Financial Requirements**

**K-3    Notice in Deed: 40 CFR 119(b)(1)**

In compliance with Kansas Administrative Regulations (KAR) 28-31-8(c) and in anticipation of Post-closure Notices required of TSDFs, CHK has submitted correspondence dated April 16, 1991 regarding property use for hazardous waste management activities to the Registrar of Deeds for Sedgwick County. Copies of these documents are presented in Appendix K-D, Notice in Deed.

**July 11, 2008  
Revision No. 11**



**Clean Harbors Kansas, LLC**  
**RCRA Permit Application**  
**Section K**  
**Financial Requirements**  
**Appendix K-A - Financial Assurance Information**

**Appendix K-A**  
**Financial Assurance Information**

**July 11, 2008**  
**Revision No. 11**

**Clean Harbors Kansas, LLC**  
**RCRA Permit Application**  
**Section K**  
**Financial Requirements**  
**Appendix K-A - Financial Assurance Information**

**Facility Information**

EPA ID NO: KSD007246846  
Facility Name: Clean Harbors Kansas, LLC  
Facility Location: 2549 North New York, Wichita, Kansas 67219

**Certificate of Insurance for Closure or Post Closure Care (CI)**

CI Policy Number: [REDACTED] EX. 4  
Issuing Institution: Steadfast Insurance Company, Schaumburg, IL  
Execution Date: September 6, 2006  
Funds Assured: \$ 1,698,848

**KANSAS CERTIFICATE OF INSURANCE  
FOR CLOSURE OR POST-CLOSURE CARE**

Name and Address of Insurer  
(herein called the "Insurer"):

Steadfast Insurance Company  
1400 American Lane  
Schaumburg, Illinois 60196

Name and Address of Insured  
(herein called the "Insured"):

Clean Harbors, Inc.  
42 Longwater Drive  
Norwell, MA 02061

Facilities Covered:

EPA Identification No. KSD 981-506-025  
Clean Harbors PPM, LLC  
2474 Highway 169 North Industrial Park  
Coffeyville, KS 67337  
Closure Costs: \$2,242,285  
Corrective Action Costs : \$2,407,578

EPA Identification No. KSD 007-246-846  
Clean Harbors Kansas, LLC  
2549 North New York Street  
Wichita, KS 67219  
Closure Costs: \$1,698,848

Face Amount:

\$6,348,711

Policy Number:

[REDACTED]

Ex. 4

Effective Date:

September 6, 2006

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for closure for the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of 40 CFR 264.143(e), 264.145(e), 265.143(d), and 265.145(d), as applicable and as such regulations were constituted on the date shown immediately

below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the Secretary of the Kansas Department of Health and Environment, the Insurer agrees to furnish to the Secretary a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in 40 CFR 264.151(e) as such regulations were constituted on the date shown immediately below.



Chris DeLauder – Regional Vice President

Authorized Representative of:      Steadfast Insurance Company  
Administrative Officer  
1400 American Lane  
Schaumburg, IL 60196-1056

Signature of witness or notary:



Date: 4/2/2008

**CERTIFICATE HOLDER**

Secretary of the Kansas Department of Health & Environment  
Kansas Department of Health & Environment  
Bureau of Waste Management  
1000 SW Jackson, Suite 320  
Topeka, KS 66612

**Clean Harbors Kansas, LLC  
RCRA Permit Application  
Section K  
Financial Requirements  
Appendix K-B - Certificate of Insurance**

**Appendix K-B**

**Certificate of Insurance for Closure or Post Closure Care**

**July 11, 2008  
Revision No. 11**

Client#: 2749

CLEANH05

|   |  |   |
|---|--|---|
| <b>ACORD™ CERTIFICATE OF LIABILITY INSURANCE</b>  |  | DATE (MM/DD/YYYY)<br>9/6/06   |
| <b>PRODUCER</b><br>William Gallagher Associates<br>Insurance Brokers, Inc.<br>470 Atlantic Avenue<br>Boston, MA 02210                           |  | THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. |
| <b>INSURED</b><br>Clean Harbors Environmental Services<br>Inc. Its Subsidiary<br>& Affiliated Companies<br>42 Longwater Drive Norwell, MA 02061 |  | <b>INSURERS AFFORDING COVERAGE</b><br>INSURER A: Steadfast Insurance Company<br>INSURER B:<br>INSURER C:<br>INSURER D:<br>INSURER E:  |
|   |  | NAIC #<br>26387   |

**COVERAGES**

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR ADDL LTR INSRD | TYPE OF INSURANCE  | POLICY NUMBER | POLICY EFFECTIVE DATE (MM/DD/YYYY) | POLICY EXPIRATION DATE (MM/DD/YYYY) | LIMITS   |
|---------------------|--|---------------|------------------------------------|-------------------------------------|--|
|                     | <b>GENERAL LIABILITY</b><br><input type="checkbox"/> COMMERCIAL GENERAL LIABILITY<br><input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR<br>GEN'L AGGREGATE LIMIT APPLIES PER:<br><input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC |               |                                    |                                     | EACH OCCURRENCE \$<br>DAMAGE TO RENTED PREMISES (Ea occurrence) \$<br>MED EXP (Any one person) \$<br>PERSONAL & ADV INJURY \$<br>GENERAL AGGREGATE \$<br>PRODUCTS - COMPROP AGG \$ |
|                     | <b>AUTOMOBILE LIABILITY</b><br><input type="checkbox"/> ANY AUTO<br><input type="checkbox"/> ALL OWNED AUTOS<br><input type="checkbox"/> SCHEDULED AUTOS<br><input type="checkbox"/> HIRED AUTOS<br><input type="checkbox"/> NON-OWNED AUTOS   |               |                                    |                                     | COMBINED SINGLE LIMIT (Ea accident) \$<br>BODILY INJURY (Per person) \$<br>BODILY INJURY (Per accident) \$<br>PROPERTY DAMAGE (Per accident) \$                                    |
|                     | <b>GARAGE LIABILITY</b><br><input type="checkbox"/> ANY AUTO   |               |                                    |                                     | AUTO ONLY - EA ACCIDENT \$<br>OTHER THAN AUTO ONLY: EA AGG \$<br>AGG \$  |
|                     | <b>EXCESS/UMBRELLA LIABILITY</b><br><input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE<br><input type="checkbox"/> DEDUCTIBLE<br>RETENTION \$   |               |                                    |                                     | EACH OCCURRENCE \$<br>AGGREGATE \$<br>\$<br>\$<br>\$   |
|                     | <b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b><br>ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/ MEMBER EXCLUDED?<br>If yes, describe under SPECIAL PROVISIONS below  |               |                                    |                                     | WC STATUTORY LIMITS <input type="checkbox"/> OTHER <input type="checkbox"/><br>E.L. EACH ACCIDENT \$<br>E.L. DISEASE - EA EMPLOYEE \$<br>E.L. DISEASE - POLICY LIMIT \$            |
| A                   | <b>OTHER Closure, Post Closure, Corrective Action</b>  |               | 9/6/06                             | 9/6/09                              |  |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

**CERTIFICATE HOLDER****CANCELLATION**

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE





***Certificate of Closure Insurance***  
***Attachment A***

|                     |  |
|---------------------|--|
| INSURER:            | Steadfast Insurance Company, a Subsidiary of Zurich-American Insurance Group (Best's Rating: A XV) |
| INSURED:            | Clean Harbors, Inc. & Subsidiaries<br>42 Longwater Drive<br>Norwell, MA 02061                      |
| POLICY PERIOD:      | 9/6/06 – 9/06/09   |
| COVERED FACILITIES: | The coverage afforded under this policy applies to the following facilities:                       |

| <i>State</i>                                  | <i>Facility</i>  | <i>EPA Identification<br/>No.</i> | <i>Policy</i> |
|---|--|-----------------------------------|---------------|
| Redacted to remove non-responsive information |  |                                   |               |
| KS  | Clean Harbors Kansas, LLC<br>2549 N. New York St., Wichita, KS 67219 | KSD007246846                      | Ex. 4         |
| Redacted to remove non-responsive information |  |                                   |               |

*State*

*Facility*

*EPA Identification  
No.*

*Policy*

Redacted to remove non-responsive information



*State*

*Facility*

*EPA Identification  
No.*

*Policy*

Redacted to remove non-responsive information

**Clean Harbors Kansas, LLC**

**RCRA Permit Application**

**Section K**

**Financial Requirements**

**Appendix K-C - Hazardous Waste Certificate of Insurance**

## **Appendix K-C**

### **Hazardous Waste Certificate of Insurance**

**July 11, 2008**  
**Revision No. 11**

## PRODUCER

Willis North America, Inc. **Ex. 4**  
26 Century Blvd  
Nashville, TN 37214

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

## INSURERS AFFORDING COVERAGE

## NAIC#

## INSURED

Clean Harbors Environmental Services, Inc.  
and its affiliates.  
42 Longwater Drive  
Norwell, MA 02061

## INSURER A

Zurich American Insurance Company

16535-002

## INSURER B

American Guarantee and Liability Insurance

26247-003

## INSURER C

Steadfast Insurance Company

26387

## INSURER D

## INSURER E

## COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| CO LTR | TYPE OF INSURANCE  | POLICY NUMBER           | POLICY EFFECTIVE DATE (MM/DD/YY) | POLICY EXPIRATION DATE (MM/DD/YY) | LIMITS  |
|--------|--|-------------------------|----------------------------------|-----------------------------------|---|
| A      | <b>GENERAL LIABILITY</b>   | [REDACTED]              | 11/1/2007                        | 11/1/2008                         | EACH OCCURRENCE \$2,000,000   |
|        | <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY   |                         |                                  |                                   | DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000                                    |
|        | <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR   |                         |                                  |                                   | MED EXP (Any one person) \$ 5,000   |
|        | <input checked="" type="checkbox"/> XCU  |                         |                                  |                                   | PERSONAL & ADV INJURY \$2,000,000   |
|        | <input checked="" type="checkbox"/> Contractual  |                         |                                  |                                   | GENERAL AGGREGATE \$3,000,000   |
|        | GEN'L AGGREGATE LIMIT APPLIES PER:   |                         |                                  |                                   | PRODUCTS-COMP/OP AGG \$2,000,000  |
|        | <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC   |                         |                                  |                                   |   |
| A      | <b>AUTOMOBILE LIABILITY</b>  | [REDACTED]              | 11/1/2007                        | 11/1/2008                         | COMBINED SINGLE LIMIT \$5,000,000   |
|        | <input checked="" type="checkbox"/> ANY AUTO   |                         |                                  |                                   | BODILY INJURY (Per person) \$   |
|        | <input type="checkbox"/> ALL OWNED AUTOS   |                         |                                  |                                   | BODILY INJURY (Per accident) \$   |
|        | <input type="checkbox"/> SCHEDULED AUTOS   |                         |                                  |                                   | PROPERTY DAMAGE \$  |
|        | <input type="checkbox"/> HIRED AUTOS   |                         |                                  |                                   | AUTO ONLY - EA ACCIDENT \$  |
|        | <input type="checkbox"/> NON-OWNED AUTOS   | OTHER THAN AUTO ONLY \$ |                                  |                                   |   |
|        | <input checked="" type="checkbox"/> MCS-90   | EACH ACCIDENT \$        |                                  |                                   |   |
|        |  | AGGREGATE \$            |                                  |                                   |   |
|        | <b>GARAGE LIABILITY</b>  | [REDACTED]              |                                  |                                   |   |
|        | <input type="checkbox"/> ANY AUTO  |                         |                                  |                                   |   |
|        |  |                         |                                  |                                   |   |
|        |  |                         |                                  |                                   |   |
| B      | <b>EXCESS LIABILITY</b>  | [REDACTED]              | 11/1/2007                        | 11/1/2008                         | EACH OCCURRENCE \$10,000,000  |
|        | <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE   |                         |                                  |                                   | AGGREGATE \$10,000,000  |
|        | <input type="checkbox"/> DEDUCTIBLE  |                         |                                  |                                   | \$  |
|        | <input type="checkbox"/> RETENTION \$  |                         |                                  |                                   | \$  |
| A      | <b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b>   | [REDACTED]              | 11/1/2007                        | 11/1/2008                         | <input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTH ER |
|        | ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below  |                         |                                  |                                   | E.L. EACH ACCIDENT \$ 2,000,000   |
|        |  |                         |                                  |                                   | E.L. DISEASE-EA EMPLOYEE \$ 2,000,000   |
|        |  |                         |                                  |                                   | E.L. DISEASE-POLICY LIMIT \$ 2,000,000  |
| C      | <b>OTHER Contractors Pollution Liability</b>   | [REDACTED]              | 11/1/2007                        | 11/1/2008                         | \$10,000,000 Each Claim<br>\$10,000,000 All Claims                                      |
| C      | DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS<br>Environmental Impairment Liability #PLC374393608 5/1/08-11/1/08 \$10,000,000 Each Claim/Aggregate |                         |                                  |                                   |   |

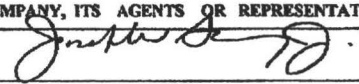
## CERTIFICATE HOLDER

For Reference Purposes Only

## CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE



**Clean Harbors Kansas, LLC  
RCRA Permit Application  
Section K  
Financial Requirements  
Appendix K-D - Notice in Deed**

**Appendix K-D  
Notice in Deed**

**July 11, 2008  
Revision No. 11**

Sedgwick County Courthouse  
4th Floor  
Registrar of Deeds  
525 N. Main  
Wichita, Ks. 67203

4/16/91

Dear Registrar of Deeds

This letter serves as official owner notification for the property :  
at 2549 N. New York Ave., HRI operated property.

North Industrial Park Fourth Addition,

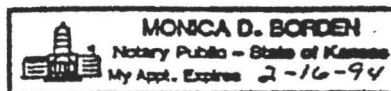
block 2, lot 1

Key Number

87-0- -B-1 3826-012583-6703

This is in accordance with Kansas environmental regulation K.A.R.  
28-31-8c. This property has been used to manage hazardous waste  
and all records regarding permits, closure or both are available  
for review at the Kansas Department of Health and Environment  
offices in Topeka.

→ *David Trombold*  
David Trombold  
Vice President  
Associated Chemical, Inc.



*Monica D. Borden*  
9-13-91

For an acknowledgment in a representative capacity:  
State of Kansas

(County) of Sedgwick

This instrument was acknowledged before me on

September 13, 1991  
by David Trombold  
as Vice President  
of Associated Chemical, Inc.

*Monica D. Borden*  
(Signature of notarial officer)

\_\_\_\_\_  
Title ( and Rank )

Sedgwick County Courthouse  
4th Floor  
Registrar of Deeds  
525 N. Main  
Wichita, Ks. 67203

4/16/91

Dear Registrar of Deeds

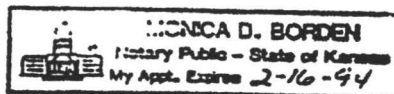
This letter serves as official owner notification for the property  
at 2549 N. New York Ave., HRI operated property.

North Industrial Park Fourth Addition,

|                | Key Number                 |
|----------------|----------------------------|
| block 1, lot 2 | 89-0- -B-13819-060842-6703 |
| lot 3          | 89-0- -B-13820-026393-6703 |
| lot 4          | 89-0- -B-13821-026394-6703 |
| lot 5          | 89-0- -B-13822-026395-6703 |

This is in accordance with Kansas environmental regulation K.A.R.  
28-31-8c This property has been used to manage hazardous waste and  
all records regarding permits, closure or both are available for  
review at the Kansas Department of Health and Environment offices  
in Topeka.

*David Trombold*  
David Trombold



*Monica D. Borden*  
9-13-91

For an acknowledgment in a representative capacity:

State of Kansas

(County) of Sedgwick

This instrument was acknowledged before me on

September 13, 1991

by David Trombold

as Vice President

of Associated Chemical, Inc.

*Monica D. Borden*  
(Signature of notarial officer)

\_\_\_\_\_  
Title (and Rank)

Clean Harbors Kansas, LLC  
RCRA Permit Application  
Section L  
Solid Waste Management Units and Corrective Action  
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February 10, 2012  
Revision No. 15

**Clean Harbors Kansas, LLC**  
**RCRA Permit Application**  
**Section L**  
**Solid Waste Management Units and Corrective Action**

**List of Figures**

Figure L.1, Location of SWMUs, AOCs, and OAs -

**List of Appendices**

Appendix L-A, RCRA Facility Investigation report  
Appendix L-B, SWMU, AOC, OA  
Appendix L-C RFI Addendum

**Acronym Table**

Solid Waste Management Unit (SWMU)  
Clean Harbors Kansas, LLC (CHK)  
Kansas Administrative Regulations (KAR)  
United States Environmental Protection Agency (USEPA)

**February 10, 2012**  
**Revision No. 15**



**Clean Harbors Kansas, LLC**  
**RCRA Permit Application**  
**Section L**  
**Solid Waste Management Units and Corrective Action**

**L-1    Information Requirements for Solid Waste Management Units: 40 CFR 270.14(d)**

The purpose of this section is to provide information regarding the Solid Waste Management Unit (SWMU)s at the Clean Harbors Kansas, LLC facility located in Wichita, Kansas. This section is provided to fulfill the requirements of the Kansas Administrative Regulations (KAR), Title 28, Article 31 and 40 CFR Part 270. Article 31, Hazardous Waste Management Standards and Regulations, of the KAR incorporates, with few additions, the RCRA regulations contained in 40 CFR Parts 260 through 270. Therefore, this section will refer only to the federal regulations. A copy of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) of the Clean Harbors Kansas, LLC facility (the facility) is located in Appendix L-A .The site was formerly owned by Safety-Kleen (Wichita), Inc. The subject site is located at 2549 New York Avenue, in an industrialized area of Wichita. The RFI report was originally submitted to the United States Environmental Protection Agency (USEPA) and the Kansas Department of Health and Environment (KDHE) on January 20, 2003. The revised RFI report was submitted in October 2004. An RFI Addendum was submitted to the agencies on August 29, 2005 and additional amended text for inclusion in the RFI was submitted on January 20, 2006. The RFI and RFI Addendum were approved with comment by the EPA on April 28, 2006. Clean Harbors Kansas continues to work with KDHE and USEPA as part of

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**Revision No. 15**

**Clean Harbors Kansas, LLC**  
**RCRA Permit Application**  
**Section L**  
**Solid Waste Management Units and Corrective Action**

the on-going corrective action program.

**L-1a Description of Solid Waste Management Units: 40 CFR 270.14(d)(1)**

Type, Location and Description of the SWMUs:

Appendix L-B lists the location and general description of all SWMU located on site. In addition, Figure L-1 illustrates the location of each SWMU within the facility as required by 40 CFR 270(b)(19). Waste characterization information is contained inside the excerpt in appendix L-A.

Dates of Operation:

CHK is an existing waste management facility. However, the site has been used for other business purposes by companies which have sequentially located at the site for some forty years. The industrial district of the area developed over the past 95 years. The history of hazardous waste operations under EPA ID No. KSD007246846 began in 1979 with Reid Supply Co., Inc. Conservation Services, Inc. purchased certain assets, including the permit (e.g., from Reid Supply Co. in 1986. Subsequently, Hydrocarbon Recyclers, Inc. (HRI), a subsidiary of U.S. Pollution Control, Inc. (USPCI), acquired Conservation Services, Inc. in 1988. USPCI was owned by Union Pacific Corporation

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**Clean Harbors Kansas, LLC**  
**RCRA Permit Application**  
**Section L**  
**Solid Waste Management Units and Corrective Action**

from 1988 through 1994. Laidlaw Environmental Services (LES) purchased USPCI in 1995; LES changed the name to Safety-Kleen (SK) Inc. after acquiring SK in 1998. Effective September 7, 2002, Clean Harbors, Inc. purchased from Safety-Kleen Services, Inc. the Wichita site

Description of Wastes:

The CHK facility stores, treats, and recovers for recycling hazardous and nonhazardous wastes. The types of wastes managed in the RCRA regulated SWMUs are identified in Sections A (Part A Application) and C (Waste Characterization). The sampling and analysis provisions for managing these waste types are provided in Appendix C-A (Waste Analysis Plan) of Section C.

**L-2    Information Pertaining to Releases: 40 CFR 270.14(d)(2)**

CHK is not aware of any releases of hazardous waste or hazardous waste constituents from regulated units within the facility. Therefore, the information required under 40 CFR 270.14(d)(2) is not available (i.e., 40 CFR 270.14(d)(2) is not applicable).

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**Clean Harbors Kansas, LLC**  
**RCRA Permit Application**  
**Section L**  
**Solid Waste Management Units and Corrective Action**

A site inspection for the purpose of identifying potential SWMUs was completed by B. & V. Waste Science and Technology Corporation under contract Number 68-W9-0006 to United States Environmental Protection Agency (USEPA) Region VII in 1990

**L-3    Superfund Activities**

The CHK facility is located within the area identified as the North Industrial corridor .Environmental Response, Compensation, and Liability Act or "Superfund" site in the Wichita North Industrial District. The facility RFI report is attached as Appendix L-A

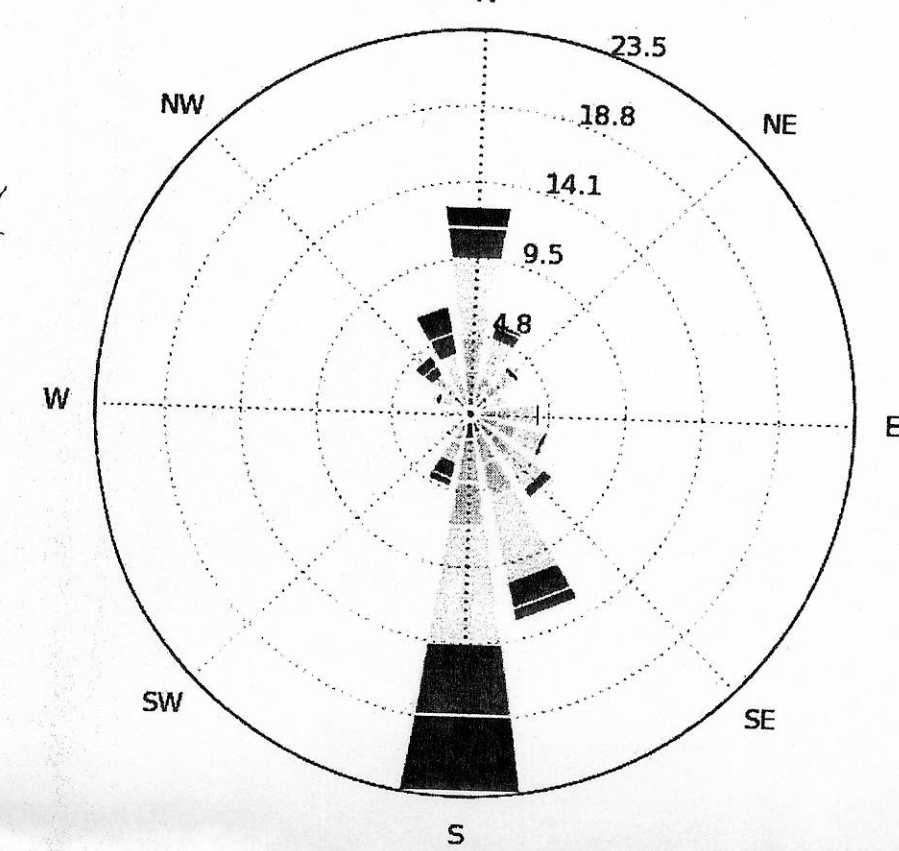
**February 10, 2012**  
**Revision No. 15**





# Full Site Survey Clean Harbors, Wichita, Kansas

WICHITA (ICT) Windrose Plot  
[All Year]  
Period of Record: 01 Jan 2010 - 31 Dec 2010  
Number of Obs: 9779 Calm: 7.7% Avg Speed: 11.1 mph



Wind Speed [mph]  
2-5 5-7 7-10 10-15 15-20 20+

- LEGEND**
- SK-128 = Groundwater Monitoring Well
  - Light Pole
  - Power Pole
  - Water Valve
  - Fire Hydrant
  - Fire Protection Siamese
  - Guy Anchor
  - Sanitary Sewer Manhole
  - Storm Water Manhole
  - Facility Boundary (NOT Surveyed)
  - Sanitary Sewer Pipe
  - Storm Water Pipe
  - Fence
  - Existing Surface Contour Major (5')
  - Existing Surface Contour Minor (1')
  - Guard Rail
  - Overhead Electric
  - Asphalt Pavement
  - Concrete Pavement
  - Gravel
  - AOC LOCATIONS
  - Other Areas (OA) Locations
  - SWMU LOCATIONS

- Building Legend**
- Building "A" Administration
  - Building "B" Warehouse/Supply Storage
  - Building "C" Hazardous Waste Management Building
  - Building "D" Warehouse/Supply Storage
  - Building "E" Administration
  - Building "F" Operations Office/Break Room
  - Building "G" Operations Office/Break Room
  - Building "H" Hazardous Waste Management Building
  - Building "I" Warehouse/Supply Storage
  - Building "J" Mechanical Equipment Building
  - Building "K" Hazardous Waste Management Building
  - Process Area
  - Drum Dock
- = Zone AE: The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

- SURVEY NOTES:**
- Access to offsite areas was limited, therefore the City of Wichita LIDAR contours were utilized and field verified where accessible. The Site and 1000' perimeter falls in Zone X of the floodplain except for Zone AE as shown hereon.
  - Zone "X" are areas of 0.2% annual chance flood.
  - FEMA Flood Insurance Rate Map (FIRM) #20173C0355E with an effective date of February 2, 2007 was utilized in determining the different floodplain zones.
  - Site is Zoned GI (General Industrial).
  - Clean Harbors Property occupies Lots 2, 3, 4, 5 of Block 1 and Lot 2 of Block 2 of North Industrial Park Fourth Addition, Wichita, KS. (Taken from the Sedgewick County GIS website)
  - Operational Unit Locations (AOC, SWMU, & OA) Areas and descriptions were provided by Cameron-Cole.

|   |                                       |
|---|---------------------------------------|
| Full Site Survey<br><b>Cameron-Cole</b><br>5777 Central Ave, Ste 200<br>Boulder, CO 80301                               |                                       |
| 1224 N. Andover Rd. Ste 100, Andover, KS 67002 P:316-425-7770 F:316-425-7773<br>ENGINEERING   SURVEYING   GIS   MAPPING |                                       |
| PROJECT NUMBER<br>11-06-641   | SURVEYED BY<br>TPH                    |
| REVISIONS:<br>06-16-2011<br>Operational Unit Locations  | APPROVED<br>BLP<br>DATE<br>06/13/2011 |
| SCALE<br>1:120<br>SHEET   | 1 OF 1                                |

K:\CAD\Full Site Survey\11-06-641\_Clean\_Harbor\11-06-641\_FSS\_CLEAN\_HARBORS.dwg

